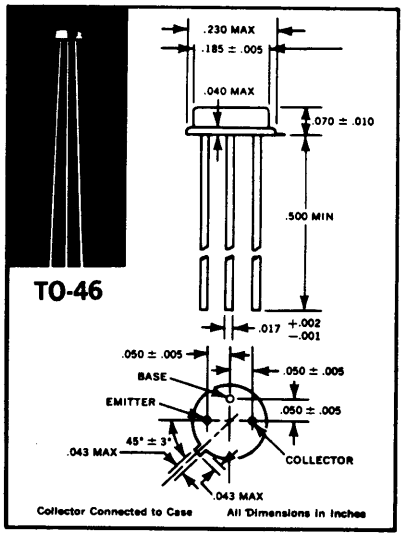
ULTRA LOW r_{EC} (sat)
SILICON EPITAXIAL JUNCTION PNP/NPN SWITCHING TRANSISTORS

2N3677
2N5066

GEOMETRY 292, (2N3677)
GEOMETRY 414, (2N5066)

- COMPLEMENTARY TYPES 2N3677 (PNP) 2N5066(NPN)
- r_{EC} (sat) 4 Ohms TYPICAL
- LOW C_{eb}
- LOW LEAKAGE
- HIGH BV_{EBO}



ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	2N3677/2N5066	UNITS
Collector to Emitter Voltage	BV_{CES}	20	Volts
Emitter to Collector Voltage	BV_{ECS}	20	Volts
Collector to Base Voltage	BV_{CBO}	30	Volts
Emitter to Base Voltage	BV_{EBO}	30	Volts
Collector Current	I_C	100	mA
Power Dissipation	P_C	400	mW
Derating Factor	D_F	2.3	mW/°C
Junction Temperature (operating and storage)	T_J	−65°C to +200°C	
Lead Temperature (1/16" ± 1/32" from case)	T_L	240°C for 10 sec.	

ELECTRICAL CHARACTERISTICS: $T_A = 25°C$ (UNLESS OTHERWISE STATED)

PARAMETER	SYMBOL	CONDITION	2N3677/2N5066			UNITS
			Min.	Typ.	Max.	
Collector To Base Leakage	I_{CBO}	$V_{CB} = V_{CB}$MAX.	—	0.5	1.0	nA
Emitter to Base Leakage	I_{EBO}	$V_{EB} = V_{EB}$MAX.	—	0.5	1.0	nA
Collector To Base Leakage	I_{CBO}	$V_{CB} = V_{CB}$MAX. (TEMP = 100°C)	—	30	100	nA
Emitter To Base Leakage	I_{EBO}	$V_{EB} = V_{EB}$MAX. (TEMP = 100°C)	—	30	100	nA
Offset Voltage	V_O	$I_B = 1$mA, $I_E = 0$	—	0.7	1.0	mV
DC Common Collector Forward Current Transfer Ratio	h_{FC}	$V_{EC} = 6$V, $I_E = 1$mA	4	8	—	—
High Frequency Current Gain	h_{fe}	$V_{CE} = 6$V, $I_C = 1$mA, f = 1MC	5	10	—	—
Inverted Dynamic Saturation Resistance	r_{EC}(sat)	$I_e = 0.1$mA, $I_B = 1.0$mA, f = 1kHz	—	4	8	Ohms
Collector To Base Capacitance	C_{ob}	$V_{CB} = 6$V, $I_C = 1$mA, f = 159kHz	—	6	10	pfd
Emitter To Base Capacitance	C_{eb}	$V_{EB} = 6$V, $I_E = 0$, f = 159kHz	—	5	6	pfd

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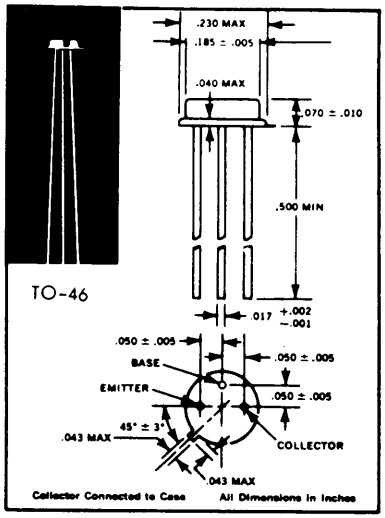
PREMIUM PERFORMANCE ULTRA LOW r_{EC} (sat) SILICON EPITAXIAL JUNCTION PNP SWITCHING TRANSISTORS

2N4006 THRU 2N4011

GEOMETRY 292

- r_{EC} (sat) 3 Ohms Typical
- LOW C_{eb}
- LOW LEAKAGE
- HIGH BV_{EBO}



ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	2N4006 2N4009	2N4007 2N4010	2N4008 2N4011	UNITS
Collector to Emitter Voltage	BV_{CEO}	−6	−15	−30	Volts
Emitter to Collector Voltage	BV_{ECO}	−6	−15	−30	Volts
Collector to Base Voltage	BV_{CBO}	−10	−20	−35	Volts
Emitter to Base Voltage	BV_{EBO}	−10	−20	−35	Volts
Collector Current	I_C	100			mA
Power Dissipation	P_T	400			mW
Derating Factor	D_F	2.3			mW/°C
Junction Temp. (Oper. & Stor.)	T_J	−65°C to +200°C			
Lead Temp. (1/16" ±1/32" from case)	T_L	240°C for 10 sec.			

ELECTRICAL CHARACTERISTICS: $T_A = 25°C$ (UNLESS OTHERWISE STATED)

PARAMETER	SYMBOL	CONDITION	2N4006 2N4009*		2N4007 2N4010*		2N4008 2N4011*		* MATCH	UNITS
			Min.	Max.	Min.	Max.	Min.	Max.		
Collector to Base Leakage	I_{CBO}	$V_{CB} = V_{CB\,MAX.}$	—	0.1	—	0.3	—	0.3	—	nA
Emitter to Base Leakage	I_{EBO}	$V_{EB} = V_{EB\,MAX.}$	—	0.1	—	0.3	—	0.3	—	nA
Collector to Base Leakage	I_{CBO}	$V_{CB} = V_{CB\,MAX}$ ($T_A = 85°C$)	—	5.0	—	15.0	—	15.0	—	nA
Emitter to Base Leakage	I_{EBO}	$V_{EB} = V_{EB\,MAX.}$ ($T_A = 85°C$)	—	5.0	—	15.0	—	15.0	—	nA
Offset Voltage	V_O	$I_B = 0.1mA$; $I_E = 0$	—	0.2	—	0.5	—	0.5	±.02	mV
Offset Voltage	V_O	$I_B = 1mA$; $I_E = 0$	—	0.5	—	0.7	—	0.8	—	mV
Inverted Saturation Resistance	$r_{EC(sat)}$	$I_B = 0.1mA$; $I_C = 0.1mA$ $f = 1kHz$	—	15	—	20	—	20	±5	Ohms
Inverted Saturation Resistance	$r_{EC(sat)}$	$I_B = 1.0mA$; $I_C = 0.1mA$ $f = 1kHz$	—	4.0	—	6.0	—	6.0	—	Ohms
DC Common Collector Forward Current Transfer Ratio	h_{FC}	$V_{EC} = -6V$; $I_E = 1mA$	40	—	30	—	20	—	—	—
High Frequency Current Gain	h_{fe}	$V_{CE} = -6V$; $I_C = 1mA$; $f = 1MHz$	20	—	15	—	15	—	—	—
Collector to Base Capacitance	C_{ob}	$V_{CB} = -6V$; $I_C = 1mA$; $f = 140kHz$	—	10	—	10	—	10	—	pfd
Emitter to Base Capacitance	C_{eb}	$V_{EB} = -5V$; $I_E = 0$; $f = 140kHz$	—	6	—	6	—	6	—	pfd
Delay Time	t_D	$R_L = 220\,\Omega$ $V_{CC} = -5V$	—	60	—	60	—	60	—	ns
Rise Time	t_R	$R_B = 1K$, $V_{BB} = +5V$	—	120	—	120	—	120	—	ns
Storage Time	t_S	$V_{pulse} = -10V$	—	320	—	320	—	320	±100	ns
Fall Time	t_F	Tektronix Type R plug-in	—	120	—	120	—	120	—	ns

2N4009 - 2N4011

* The 2N4009 is a matched pair of 2N4006
The 2N4010 is a matched pair of 2N4007
The 2N4011 is a matched pair of 2N4008

ΔV_O at $I_B = 0.1mA$; $-25°C/+100°C$ ±50μV
ΔV_{CB} at $I_B = 0.1mA$; $I_E = 0$ $T_A = 25°C$ ±100MV

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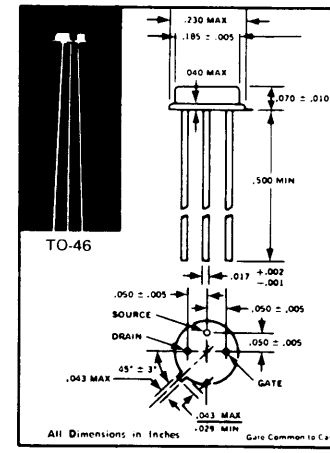
ULTRA LOW R_{ON} SWITCHING
SILICON EPITAXIAL JUNCTION N-CHANNEL FIELD EFFECT TRANSISTORS

2N4445 thru 2N4448

GEOMETRY 448

- **LOW R_{DS} – 4 Ohms TYPICAL**
- **LOW C_{GD} – 15 pfd TYPICAL**
- **HIGH I_{DSS} – 400mA TYPICAL**



ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	2N 4445	2N 4446	2N 4447	2N 4448	UNITS
Drain to Gate Voltage	BV_{DGO}	25	25	20	20	Volts
Gate to Source Voltage	BV_{GSO}	-25	-25	-20	-20	Volts
Peak Forward Gate Current	I_{GF}	100	100	100	100	mA
Peak Drain Current	I_D	400	400	400	400	mA
Power Dissipation (free air)	P_D	400	400	400	400	mW
Derating Factor (free air)	D_F	2.3	2.3	2.3	2.3	mW/°C
Junction Temp. (Oper. & Store)	T_J	-65°C to +200°C				
Lead Temp. (@ 1/16" ± 1/32" from case)	T_L	240°C for 10 sec.				

ELECTRICAL CHARACTERISTICS: T_A = 25°C (UNLESS OTHERWISE STATED)

PARAMETERS AND CONDITIONS	SYMBOL	2N4445			2N4446			2N4447			2N4448			UNITS
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Gate Leakage Current V_{GS} = 15V, V_{DS} = 0	I_{GSS}	–	–	3.0	–	–	3.0	–	–	3.0	–	–	3.0	nA
Gate Leakage Current V_{GS} = 15V, V_{DS} = 0, T_A = 100°C	I_{GSS}	–	–	0.6	–	–	0.6	–	–	0.6	–	–	0.6	μA
Drain Cutoff Current V_{GS} = -10V, V_{DS} = 5V	$I_{D\ OFF}$	–	–	3.0	–	–	3.0	–	–	3.0	–	–	3.0	nA
Drain Cutoff Current V_{GS} = -10V, V_{DS} = 5V, T_A 100°C	$I_{D\ OFF}$	–	–	0.6	–	–	0.6	–	–	0.6	–	–	0.6	μA
Pinch-Off Voltage V_{DS} = 5V, I_{DS} 3nA	V_{PO}	2.0	7.0	10	2.0	7.0	10	2.0	7.0	10	2.0	7.0	10	Volts
On Resistance V_{DS} = 0.1V, V_{GS} = 0	R_{DS}	–	4.0	5.0	–	7.0	10	–	4.0	6.0	–	7.0	12	Ohms
Drain-Source "On" Voltage I_D = 10mA, V_{GS} = 0	V_{DS} (On)	–	–	50	–	–	100	–	–	60	–	–	120	mV
Drain Current* V_{DS} = 2V, V_{GS}= 0	I_{DSS}	150	–	–	100	–	–	150	–	–	100	–	–	mA
Gate to Source Cap. V_{GS} = 20V	C_{GS}	–	18	25	–	18	25	–	18	25	–	18	25	pfd
Gate to Drain Cap. V_{GD} = 20V	C_{GD}	–	18	25	–	18	25	–	18	25	–	18	25	pfd
Turn On Time[1]	Td + Tr	–	35	–	–	35	–	–	35	–	–	35	–	nS
Turn Off Time[1]	Ts + Tf	–	35	–	–	35	–	–	35	–	–	35	–	nS

*Pulse Measurement 1% Duty Cycle 10 MS Max.

[1] R_G = 50 Ω, V_{DD} = 1.5V, R_D = 150 Ω, V pulse = -10V, Pulse width 0.5μs min., V_{GS} = OV

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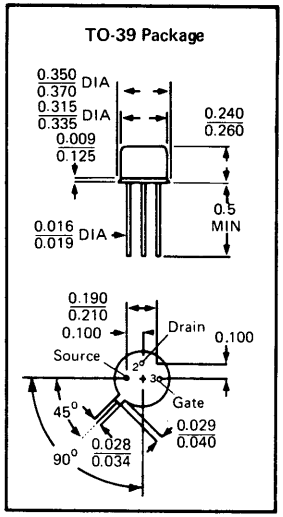
HIGH VOLTAGE
SILICON EPITAXIAL JUNCTION
N-CHANNEL FIELD EFFECT TRANSISTORS

2N5543
2N5544

GEOMETRY 559

FEATURES
- HIGH BV_{DGO} > 300V (2N5543)
- LOW CAPACITANCE

APPLICATIONS
- HIGH VOLTAGE CURRENT SOURCE
- HIGH VOLTAGE SWITCH



ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	2N5543	2N5544	UNITS
Drain to Gate Voltage	BV_{DGO}	300	200	Volts
Gate to Source Voltage	BV_{GSR}	-75	-50	Volts
Power Dissipation (25°C case)	P_{DC}	5		W
Derating Factor (Junction to Case)	D_{FC}	3.33		mW/°C
Power Dissipation (free air)	P_{DA}	800		mW
Derating Factor (free air)	D_{FA}	5.33		mW/°C
Junction Temp. (Oper. & Store)	T_J	-65 to 200		°C
Lead Temp. (1/16" From Case 10 sec)	T_L	300		°C
Continuous Forward Gate Current	I_{GF}	10		mA

ELECTRICAL CHARACTERISTICS: T_A = 25°C (UNLESS OTHERWISE STATED)

SYMBOL	CONDITIONS	2N5543		2N5544		UNITS
		Min.	Max.	Min.	Max.	
BV_{DGO}	I_G = 1μA	300		200		V
I_{GSS}	V_{GS} = -40V, V_{DS} = 0 V_{GS} = -40V, T_A = 150°C		-2.0 -4.0		-2.0 -4.0	nA μA
I_{GSS}	V_{GS} = -75V, V_{DS} = 0 V_{GS} = -50V, V_{DS} = 0		-1.0		-1.0	μA μA
$V_{GS(OFF)}$	V_{DS} = 30V, I_D = 4nA	-2	-15	-2	-15	V
I_{DSS}	V_{DS} = 30V, V_{GS} = 0(1)	2	10	2	10	mA
Y_{fs}	V_{DS} = 30V, V_{GS} = 0, f=1 kHz (1)	750	3000	750	3000	μmhos
Y_{os}	V_{DS} = 30V, V_{GS} = 0, f=1 kHz (1)		100		100	μmhos
$r_{ds(ON)}$	V_{GS} = 0, I_D = 0, f=1 kHz		2000		2000	Ohms
C_{iss}	V_{DS} = 30V, V_{GS} = 0, f=1 MHz		10		10	pfd
C_{rss}	V_{DS} = 30V, V_{GS} = 0, f=1 MHz		2		2	pfd
Y_{fs}	V_{DS} = 30V, V_{GS} = 0, f=10 MHz	500		500		μmhos

NOTE: Pulsed at t_p = 100 ms, duty cycle = < 10%

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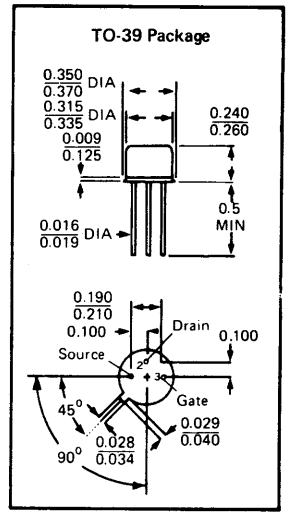
HIGH VOLTAGE
SILICON EPITAXIAL JUNCTION
N-CHANNEL FIELD EFFECT TRANSISTORS

2N6449
2N6450

GEOMETRY 559

- HIGH BV_{GSS} . . . 300V MIN (2N6449)
- HIGH POWER RATING . . . 5W



ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	2N6449	2N6450	UNITS
Drain to Gate Voltage	BV_{DGO}	300	200	Volts
Gate to Source Voltage	BV_{GSO}	-300	-200	Volts
Power Dissipation (25°C case)	P_{DC}	5		W
Derating Factor (Junction to Case)	D_{FC}	3.33		mW/°C
Power Dissipation (free air)	P_{DA}	800		mW
Derating Factor (free air)	D_{FA}	5.33		mW/°C
Junction Temp. (Oper. & Store)	T_J	-65 to 200		°C
Lead Temp. (1/16" From Case 10 sec)	T_L	300		°C
Continuous Forward Gate Current	I_{GF}	10		mA

ELECTRICAL CHARACTERISTICS: T_A = 25°C (UNLESS OTHERWISE STATED)

PARAMETERS AND CONDITIONS	SYMBOL	2N6449			2N6450			UNITS
		Min.	Typ.	Max.	Min.	Typ.	Max.	
Gate Leakage Current V_{GS} = -150V, V_{DS} = 0	I_{GSS}		-1	-10				nA
Gate Leakage Current V_{GS} = -150V, V_{DS} = 0, T_A = 150°C	I_{GSS}		-1	-10				μA
Gate Leakage Current V_{GS} = -100V, V_{DS} = 0	I_{GSS}		-1			-1	-10	nA
Gate Leakage Current V_{GS} = -100V, V_{DS} = 0, T_A = 150°C	I_{GSS}		-1			-1	-10	μA
Gate Breakdown Voltage I_G = -10μA, V_{DS} = 0	BV_{GSS}	-300			-200			V
Pinch-Off Voltage V_{DS} = 30V, I_D = 4nA	V_{PO}	-2		-15			-15	V
	I_{DSS}	2		10			10	mA
Forward Transfer Admittance V_{DS} = 30V, V_{GS} = 0, f=1 kHz	Y_{fs}[2]	500		3000	500		3000	μmho
Output Admittance V_{DS} = 30V, V_{GS} = 0, f=1 kHz	Y_{os}[2]			100			100	μmho
Input Capacitance V_{DS} = 30V, V_{GS} = 0, f=1 kHz	C_{iss}[2]			10			10	
Reverse Xfer Cap. V_{DS} = 30V, V_{GS} = 0, f=1 kHz	C_{rss}[2]			5			5	

NOTES: 1. Measured using pulse techniques, t_W = 300μs, duty cycle<2%.
2. Measured with bias conditions applied for less than 5 seconds.

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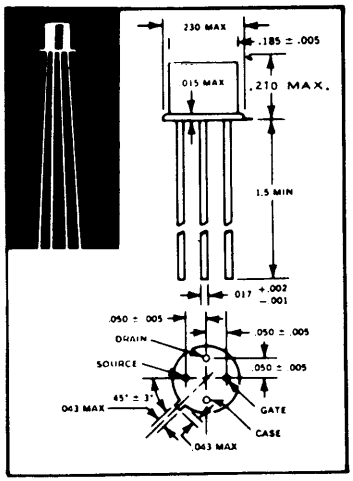
ULTRA LOW NOISE
SILICON EPITAXIAL JUNCTION
N-CHANNEL FIELD EFFECT TRANSISTOR

2N6550
CM860

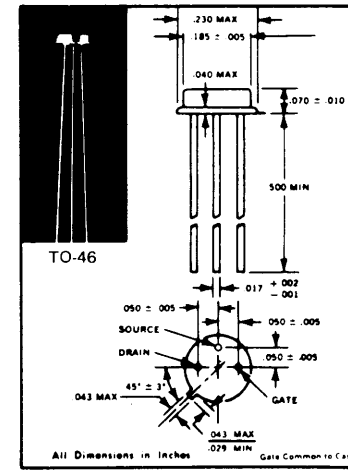


CM860

The CM860 is in the four lead, TO-72 package which isolates all elements from the case, reducing stray capacitance and allowing the engineer greater design freedom.

GEOMETRY 424

The 2N6550/CM860 is a high, g_m/I_D low noise junction F.E.T. for low level amplifier use. The min. g_m of 25,000 μmho assures a voltage gain of 25 min. with a 1K drain load. As a source follower, it has typical output impedance of 25 ohms. The 10mA operating point is easily held due to its low pinch-off voltage and is very close to its zero T.C. point for temperature stable operation.



2N6550

ELECTRICAL DATA ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	2N6550	UNITS
Drain to Source Voltage	BV_{DSO}	20	Volts
Drain to Gate Voltage	BV_{DGO}	20	Volts
Gate to Source Voltage	BV_{GSO}	-20	Volts
D.C. Forward Gate Current	I_{GF}	50	mA
Junction Temp. (Operating & Storage)	T_J	-65°C to +200°C	
Power Dissipation (Free Air)	P_D	400 mW	
Lead Temp. (@ 1/16" ± 1/32" from case)	T_L	240°C for 10 sec.	
Derating Factor (Free Air)	D_F	2.3 mW/°C	

ELECTRICAL CHARACTERISTICS: T_A = 25°C (UNLESS OTHERWISE STATED)

PARAMETER	SYMBOL	CONDITION	2N6550			UNITS
			Min.	Typ.	Max.	
Gate Leakage Current	I_{GSS}	V_{GS} = -10V, V_{DS} = 0		0.1	3.0	nA
Gate Leakage Current	I_{GSS}	V_{GS} = -10V, V_{DS} = 0, T_A = 85°C		5	100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 10V, V_{GS} = 0	10	100		mA
Pinch-Off Voltage	V_{PO}	V_{DS} = 10V, I_D = 0.1mA	0.3	1.5	3.0	Volts
Transconductance	g_m	V_{DS} = 10V, I_D = 10mA, f = 1kHz	25	40		mmho
Input Capacitance	C_{iss}	V_{DS} = 10V, I_D = 10mA, f = 140kHz		30	35	pfd
Reverse Xfer Cap	C_{rss}	V_{DS} = 10V, f = 140kHz		17	20	pfd
Gate to Drain Capacitance	C_{GD}	V_{GD} = -10V, f = 140kHz		20		pfd
Output Admittance	Y_{OS}	V_{DS} = 10V, I_D = 10mA		50	100	μmho
Input Noise Voltage	e_n	V_{DS} = 5V, I_D = 10mA, f = 1kHz		1.4	2.0	$nV/Hz^{1/2}$
Input Noise Voltage	e_n	V_{DS} = 5V, I_D = 10mA, f = 10Hz		6.0	10	$nV/Hz^{1/2}$
Input Noise Voltage	e_n TOTAL	V_{DS} = 5V, I_D = 10mA, f = 10Hz to 20kHz		0.4	0.6	μVrms
Equivalent Open Ckt. Input Noise current	i_n	Rsource < 100K Ω f = 1 kHz		.01		$pA/Hz^{1/2}$

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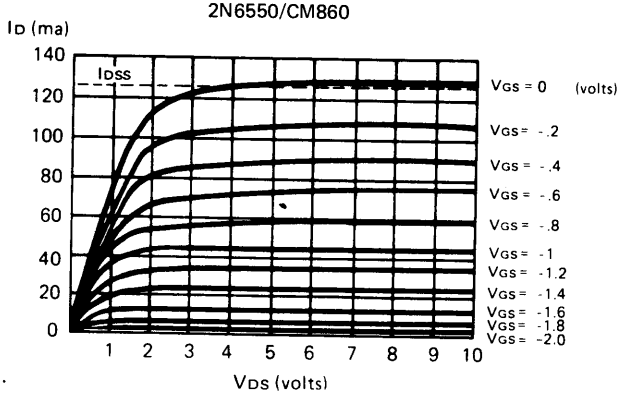
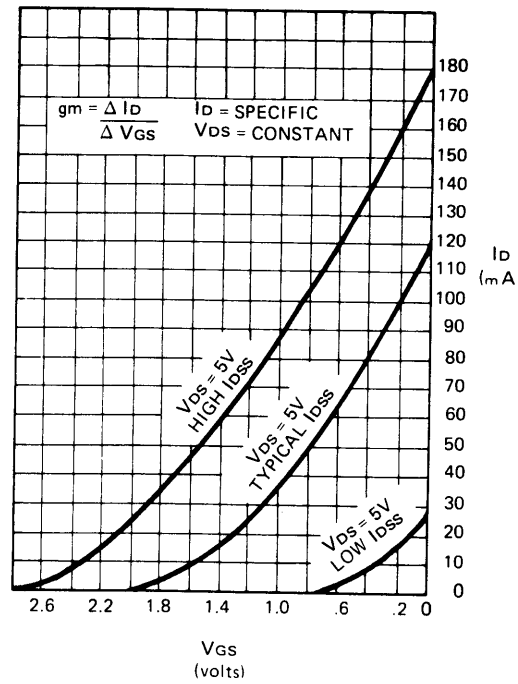
TYPICAL CHARACTERISTIC CURVES

2N6550/CM860

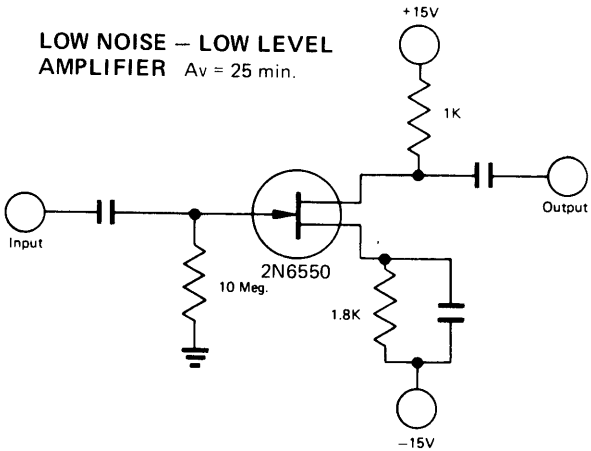


TRANSCONDUCTANCE CHARACTERISTICS

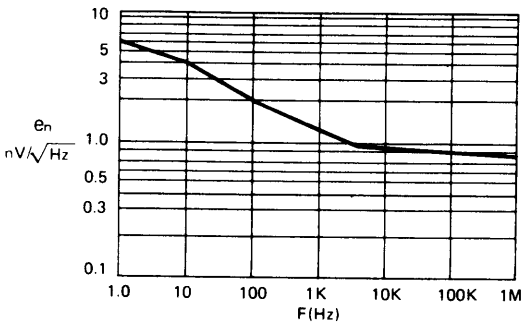
2N6550/CM860



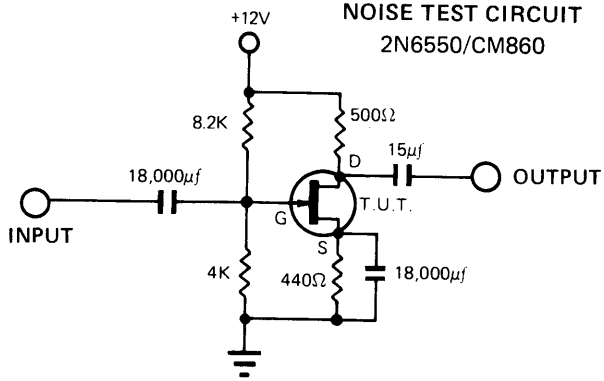
LOW NOISE – LOW LEVEL AMPLIFIER Av = 25 min.



TYPICAL 2N6550 SHORT CIRCUIT INPUT NOISE VS. FREQUENCY



NOISE TEST CIRCUIT 2N6550/CM860



TELEDYNE CRYSTALONICS

147 Sherman Street, Cambridge, Mass. 02140
Tel: (617) 491-1670 • TWX: 710-320-1196

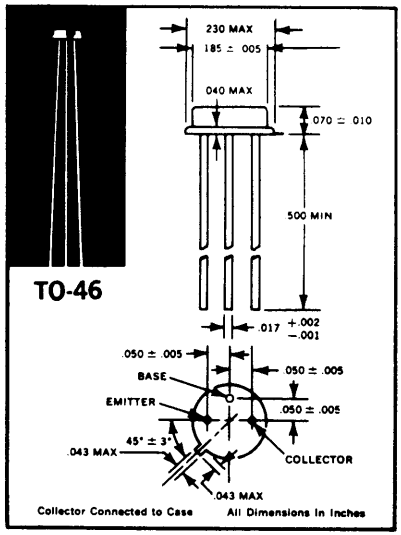
ULTRA LOW r_{EC} (sat)
SILICON EPITAXIAL JUNCTION
NPN/PNP SWITCHING TRANSISTORS

2N6566

2N6567

GEOMETRY 453, BOTH NPN & PNP

- **COMPLEMENTARY TYPES 2N6566(NPN), 2N6567(PNP)**
- **r_{EC} (sat) 2 Ohms MAX.**
- **LOW C_{eb}**
- **LOW LEAKAGE**
- **HIGH BV_{EBO}**



ELECTRICAL DATA: ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	2N6566-2N6567	UNITS
Collector to Emitter Voltage	BV_{CES}	30	Volts
Emitter to Collector Voltage	BV_{ECS}	20	Volts
Collector to Base Voltage	BV_{CBO}	30	Volts
Emitter to Base Voltage	BV_{EBO}	30	Volts
Collector Current	I_C	100	mA
Power Dissipation	P_C	400	mW
Derating Factor	D_F	2.3	mW/°C
Junction Temperature (operating and storage	T_J	−65°C to +200°C	
Lead Temperature (1/16" ± 1/32" from case)	T_L	240°C for 10 sec.	

ELECTRICAL CHARACTERISTICS: T_A = 25°C (UNLESS OTHERWISE STATED)

PARAMETER	SYMBOL	CONDITION	2N6566-2N6567			UNITS
			Min.	Typ.	Max.	
Collector To Base Leakage	I_{CBO}	V_{CB} = V_{CB}MAX.	–	0.2	0.5	nA
Emitter to Base Leakage	I_{EBO}	V_{EB} = V_{EB}MAX.	–	0.2	0.5	nA
Collector To Base Leakage	I_{CBO}	V_{CB} = V_{CB}MAX. (TEMP = 100°C)	–	30	100	nA
Emitter To Base Leakage	I_{EBO}	V_{EB} = V_{EB}MAX. (TEMP = 100°C)	–	30	100	nA
Offset Voltage	V_O	I_B = 1mA, I_E = 0	–	0.7	1.0	mV
DC Common Collector Forward Current Transfer Ratio	h_{FC}	V_{EC} = 6V, I_E = 1mA	30	–	–	–
High Frequency Current Gain	h_{fe}	V_{CE} = 6V, I_C = 1mA, f = 1MC	3	–	–	–
Inverted Dynamic Saturation Resistance	r_{EC} (sat)	I_e = 1.0mA, I_B = 10mA, f = 1kHz	–	1.5	2	Ohms
Collector To Base Capacitance	C_{ob}	V_{CB} = 6V, I_C = 1mA, f = 159kHz	–	8	10	pfd
Emitter To Base Capacitance	C_{eb}	V_{EB} = 6V, I_E = 0, f = 159kHz	–	5	6	pfd

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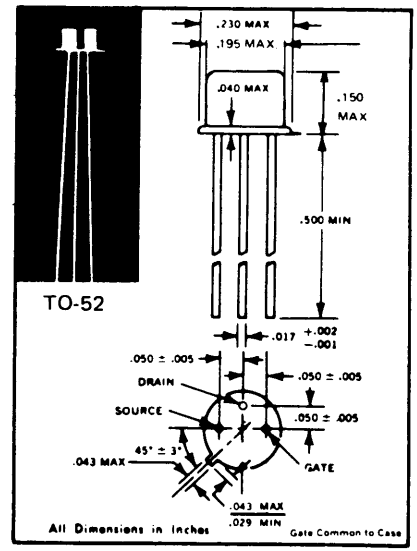
ULTRA LOW R_{ON} SWITCHING
SILICON EPITAXIAL JUNCTION N-CHANNEL FIELD EFFECT TRANSISTOR

2N6568

GEOMETRY 456

- LOW R_{DS} – 2½ Ohms MAXIMUM
- HIGH I_{DSS} – 500 mA MINIMUM



ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	2N6568	UNITS
Drain to Gate Voltage	BV_{DGO}	30	Volts
Gate to Source Voltage	BV_{GSO}	-30	Volts
Peak Forward Gate Current	I_{GF}	100	mA
Peak Drain Current	I_D	1.0	A
Power Dissipation (free air)	P_D	400	mW
Derating Factor (free air)	D_F	2.3	mW/°C
Junction Temp. (Oper. & Store)	T_J	−65°C to +200°C	
Lead Temp. (@1/16" to 1/32" from case)	T_L	240°C for 10 sec.	

ELECTRICAL CHARACTERISTICS: T_A = 25° C (UNLESS OTHERWISE STATED)

PARAMETERS and CONDITIONS	SYMBOL	CONDITION	2N6568			UNITS
			Min.	Typ.	Max.	
Gate Leakage Current	I_{GSS}	V_{GS} = -15V, V_{DS} = 0	–	–	1.0	nA
Gate Leakage Current	I_{GSS}	V_{GS} = -15V, V_{DS} = 0, T_A = 100°C	–	–	1.0	μA
Drain Cutoff Current	$I_{D\ OFF}$	V_{GS} = -10V, V_{DS} = 15V	–	–	3.0	nA
Drain Cutoff Current	$I_{D\ OFF}$	V_{GS} = -10V, V_{DS} =15V, T_A = 100°C	–	–	1.0	μA
Pinch-Off Voltage	V_{PO}	V_{DS} =15V, I_{DS} = 3nA	–	8	10	Volts
On Resistance	R_{DS}	I_D = 10mA, V_{GS} = 0	1.5	–	2.5	Ohms
Drain Source "On" Voltage	V_{DS} (On)	I_D = 10mA, V_{GS} = 0	–	–	25	mV
Drain Current*	I_{DSS}	V_{DS} = 2V, V_{GS} = 0	500	–	–	mA
Gate to Source Cap.	C_{GS}	V_{GS} = -20V	–	45	60	pfd
Gate to Drain Cap.	C_{GD}	V_{GD} = -20V	–	45	60	pfd
Turn On Time[1]	Td + Tr		–	50	–	nS
Turn Off Time[1]	Ts + Tf		–	75	–	nS

* Pulse Measurement 1% Duty Cycle 10 MS Max.

[1] R_G = 50 Ω V_{DD} = 1.5V, R_D = 150 Ω V, pulse = -15V, Pulse width 0.5 μsmin., V_{GS} = OV

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