

ENGINEERING DATA SHEET

2N6573
2N6574
2N6575



Delco Electronics SEMICONDUCTORS

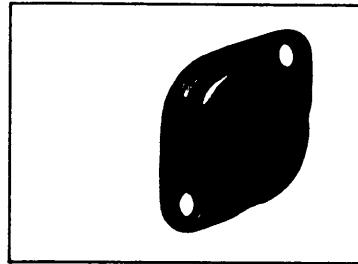
NPN SILICON

GENERAL DESCRIPTION

The Delco 2N6573 series are NPN triple diffused silicon power transistors designed for use in high voltage applications. The high voltage and current ratings of this series make them ideal for use in deflection circuits, switching regulators and line operated amplifiers.

The case is hermetically sealed and electrically connected to the collector.

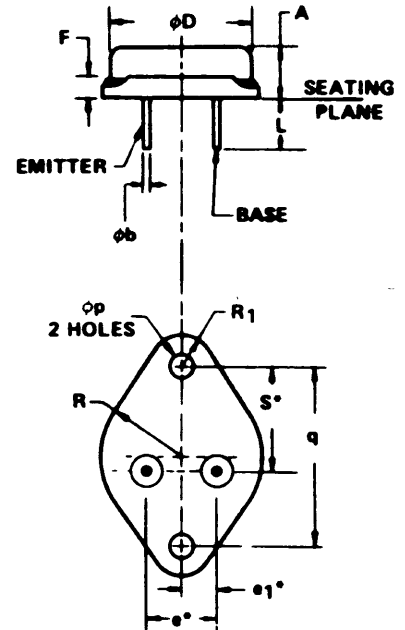
Physical dimensions conform to the standard JEDEC TO-3 outline.



*** ABSOLUTE MAXIMUM RATINGS**

	2N6573	2N6574	2N6575
Collector-base voltage (V _{CB0}).....	500V	600V	700V
Collector-emitter voltage (V _{CEO} (sus)).....	250V	275V	300V
Emitter-base voltage (V _{EB0}).....	—————	5V	—————
Collector current - Peak (I _C).....	—————	15A	—————
Collector current - Continuous (I _C).....	—————	10A	—————
Base current (I _B).....	—————	4A	—————
Maximum power dissipation.....	—————	125W	—————
Operating and storage junction temperature range	—————	-65°C to 200°C	—————
Lead temperature 1/16" ± 1/32" from case for 10 seconds	—————	300°C	—————

DIMENSIONS AND CONNECTIONS



* MEASURED AT SEATING PLANE

*** THERMAL CHARACTERISTICS**

Thermal resistance, junction to heat sink	1.4°C/W max.
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*EIA registered parameters

SYM	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	.250	.328	6.35	8.33
φb	.038	.043	.966	1.092
φD		.875		22.22
e	.420	.440	10.67	11.17
e ₁	.205	.225	5.21	5.71
F	.060	.136	1.53	3.42
L	.410	.470	10.41	11.94
φp	.151	.161	3.84	4.08
q	1.177	1.197	29.90	30.40
R	.495	.525	12.58	13.33
R ₁	.131	.188	3.33	4.77
S	.655	.675	16.64	17.14

DITRATHERM
 HALBLEITER-VERTRIEB DER ERNST ROEDERSTEIN GMBH
8300 LANDSHUT/BAYERN





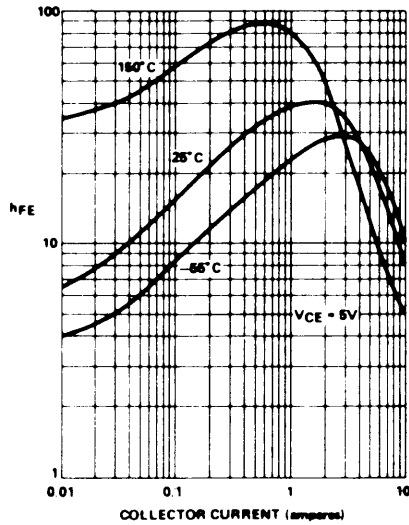
***ELECTRICAL CHARACTERISTICS**

SYM.	PARAMETER	TYPE	CONDITIONS	MIN.	MAX.	UNIT
I _{EBO}	Emitter cutoff current	All	V _{EBO} = 5V		5.0	mA
I _{CEV}	Collector-emitter cutoff current	2N6573	V _{CE} = 500V, V _{BE} = -1.5V		0.5	mA
		2N6574	V _{CE} = 600V, V _{BE} = -1.5V		0.5	mA
		2N6575	V _{CE} = 700V, V _{BE} = -1.5V		0.5	mA
		2N6573	V _{CE} = 500V, V _{BE} = -1.5V		1.0	mA
		2N6574	V _{CE} = 600V, V _{BE} = -1.5V		1.0	mA
		2N6575	V _{CE} = 700V, V _{BE} = -1.5V		1.0	mA
h _{FE}	Current gain	2N6573 2N6574 2N6575	I _C = 3A, V _{CE} = 3V	15	60	
				20	60	
				20	60	
		All	I _C = 7A, V _{CE} = 3V	7	21	
		All	I _C = 10A, V _{CE} = 5V	5		
V _{CE} (sat)	Collector-emitter saturation voltage	2N6573	I _C = 3A, I _B = 0.3A		1.2	V
		2N6574			1.0	V
		2N6575			1.0	V
		All	I _C = 7A, I _B = 1.4A		1.5	V
V _{BE} (sat)	Base-emitter saturation voltage	All	I _C = 10A, I _B = 2A		5.0	V
		2N6573	I _C = 7A, I _B = 1.4A		1.6	V
V _{CEO} (sus)	Sustaining voltage	2N6573	I _C = 250mA, L = 50mH	250		V
		2N6574	Read at 100mA	275		V
		2N6575	(See figure 5 & 6)	300		V
t _d	Delay time	All	I _C = 7A, I _{B1} = I _{B2} =		0.15	μs
t _r	Rise time	All	1.4A, t _p = 10μs		0.9	μs
t _f	Storage time	All	Duty Cycle ≤ 2%		2.5	μs
		All	(See figure 7)		0.7	μs
f _T	Current gain - bandwidth product	All	f _{test} = 1.0MHz I _C = 0.2A, V _{CE} = 10V	5	15	MHz
C _{obo}	Output capacitance	All	f _{test} = 1.0MHz V _{CB} = 10V, I _E = 0	100	220	pF
I _{s/b}	Second breakdown collector current	All	V _{CE} = 200V, t = 1 sec. (non-repetitive)	0.2		A

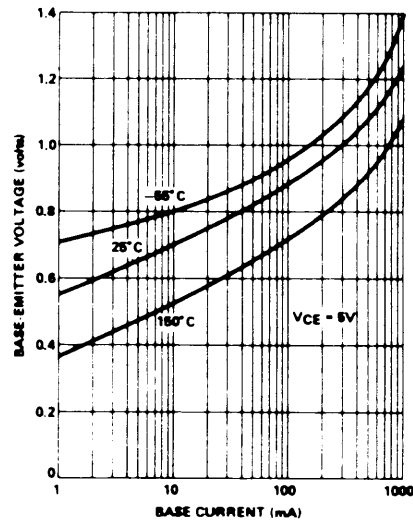
*EIA registered parameters

2N6573 2N6574 2N6575

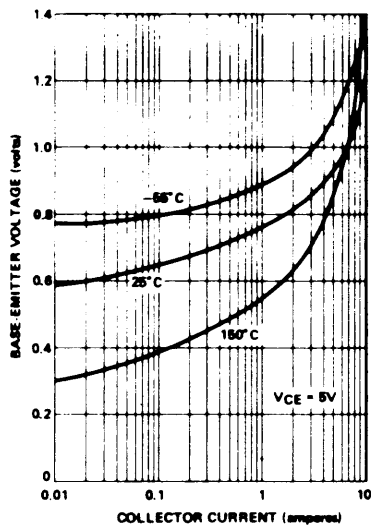
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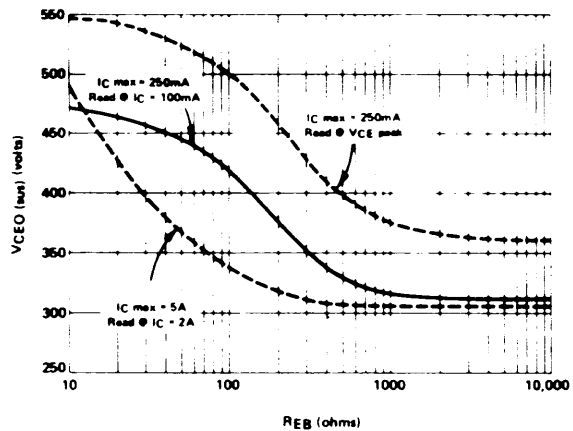
h_{FE} vs I_C
CHARACTERISTICS
FIGURE 1



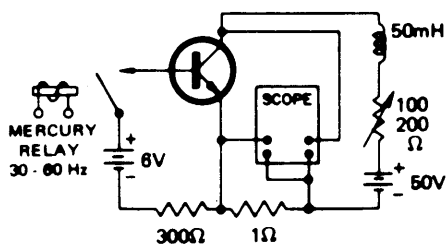
INPUT CHARACTERISTICS
FIGURE 2



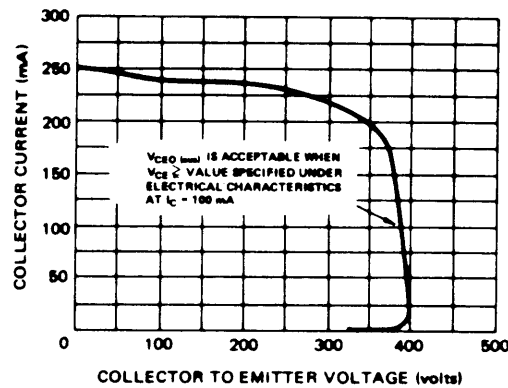
TRANSCONDUCTANCE
CHARACTERISTICS
FIGURE 3



SUSTAINING VOLTAGE vs
BASE-TO-EMITTER RESISTANCE
FIGURE 4



$V_{CEO(sus)}$
TEST CIRCUIT
FIGURE 5

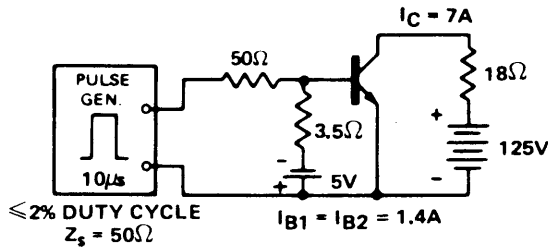


$V_{CEO(sus)}$ OSCILLOSCOPE
DISPLAY
FIGURE 6

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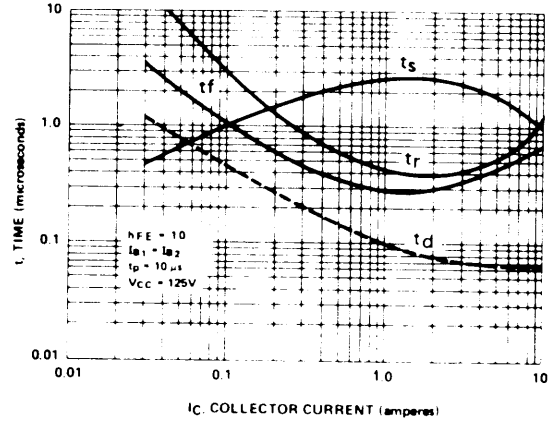


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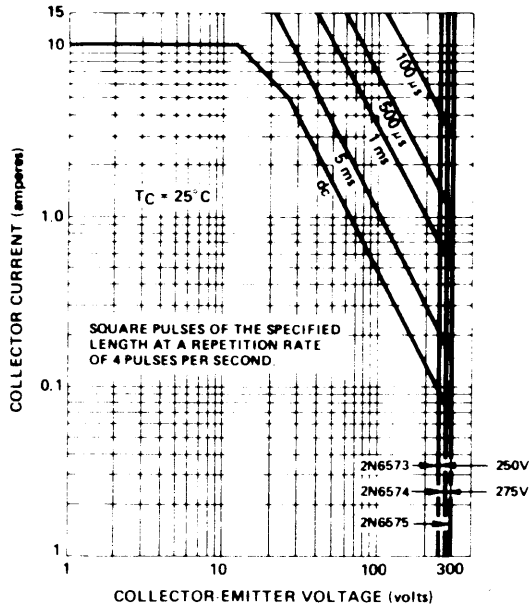
SWITCHING TIME TEST CIRCUIT

FIGURE 7



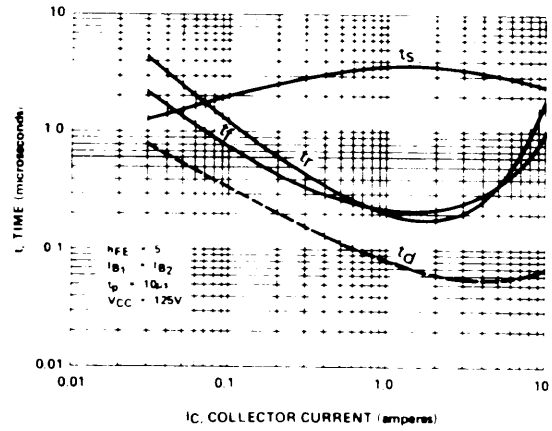
RESISTIVE SWITCHING PERFORMANCE

FIGURE 9



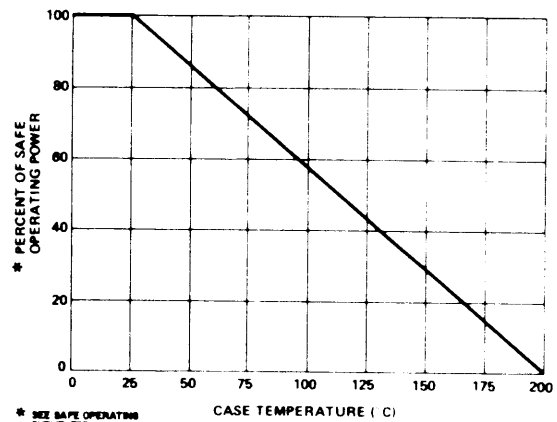
SAFE OPERATING CURVES

FIGURE 8



RESISTIVE SWITCHING PERFORMANCE

FIGURE 10



* SEE SAFE OPERATING CURVE FOR MAXIMUM POWER RATING AS A FUNCTION OF COLLECTOR TO EMITTER VOLTAGE

DERATING CURVE

FIGURE 11