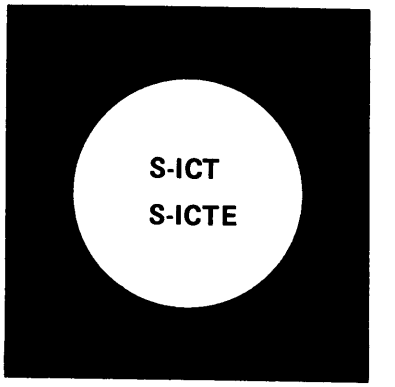
Silicon Voltage Transient Suppressor Diodes

I.C. TRANSIENT PROTECTORS
1.5 KW (D013) AND (EPOXY CASE)



FEATURES

- MOLDED OR METAL CASE
- EPITAXIAL JUNCTION
- LOW LEAKAGE
- LOW V_Z/ I_Z CHARACTERISTICS
- VOLTAGE RANGE: 5,0 to 45 Volts

THE SICT SERIES HAS BEEN DESIGNED TO COVER THE MOST COMMON OPERATING VOLTAGE LEVELS OF A WIDE RANGE OF MICROPROCESSORS, MEMORIES, DIGITAL AND LINEAR ICs.

MAXIMUM RATINGS

Peak Pulse Power Dissipation (T_A 25°C)	P_p	1500 Watts
Peak Forward Surge Current (T_A 25°C, 8,3 msec)	I_{FM}	200 Amps
Maximum Forward Voltage Drop (100A peak, 8,3 msec sine wave)	V_F	2,0 Volts
D.C. Power Dissipation (T_A=25°) S-ICT	P_M	1 Watt
D.C. Power Dissipation (T_L=75°, Lead Length 3/8") S-ICTE	P_M	5 Watts
Operating and Storage Temperature	Topr, Tstg	–65°C to +175°C

ELECTRICAL CHARACTERISTICS:

TYPE NUMBER		Reverse Stand-Off Voltage V_R Volts	Maximum Reverse Leakage V_R I_R UA uA	Minimum Breakdown Voltage 1 mA B_V (min) Volts	Maximum Clamping Voltage Ipp = 1 A V_C Volts	Maximum Clamping Voltage Ipp = 10 A V_C Volts	Maximum Peak Pulse Current Ipp A
SICT-5	SICTE-5	5.0	300	6.0	7.1	7.5	160
SICT-8	SICTE-8	8.0	25	9.4	11.3	11.5	100
SICT-10	SICTE-10	10.0	2	11.7	13.7	14.1	90
SICT-12	SICTE-12	12.0	2	14.1	16.1	16.5	70
SICT-15	SICTE-15	15.0	2	17.6	19.6	20.4	60
SICT-18	SICTE-18	18.0	2	21.2	24.2	25.2	50
SICT-22	SICTE-22	22.0	2	25.9	29.8	32.0	40
SICT-36	SICTE-36	36.0	2	42.4	50.6	54.3	23
SICT-45	SICTE-45	45.0	2	52.9	63.3	70.0	19

ABBREVIATONS AND SYMBOLS

- V_R Stand-Off Voltage. Maximum rated reverse voltage which can be applied to the SICT-Series with non-conducting condition. Cathode terminal positive.
- Ipp Peak Pulse Current
- Pp Peak Pulse Power
- I_R Reverse Leakage
- B_V (min) Minimum Breakdown Voltage
- V_C (max) Maximum Clamping Voltage. The maximum peak voltage appearing across the SICT-Series when subjected to the peak pulse current in a one millisecond time interval. The peak pulse voltages are the combination of voltage rise due to both the internal impedance and thermal rise.

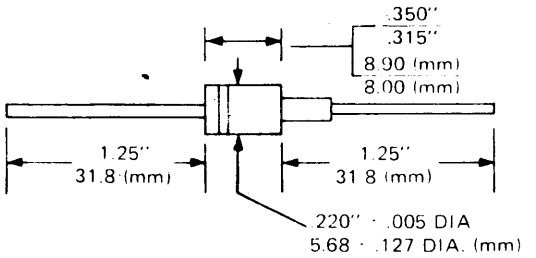
Semicon INC.

SEMICONDUCTOR DEVICES

AURIEMA GMBH

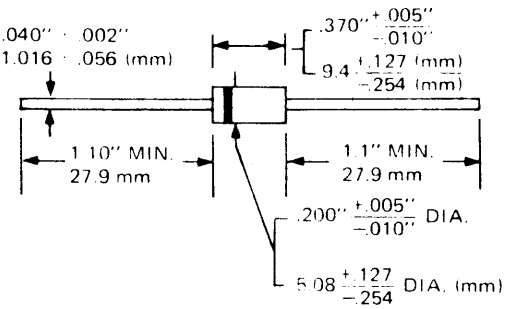
71 HEILBRONN, UHDESTRASSE 33
TELEFON 07131 / 5 30 66 · TELEX 07 28 639

CASE STYLE "A"



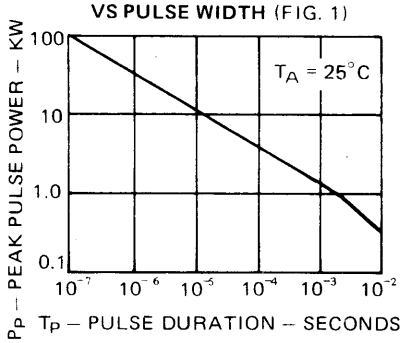
JEDEC DO-13 GLASS TO METAL CASE
CATHODE IS COMMON TO CASE

CASE STYLE "B"

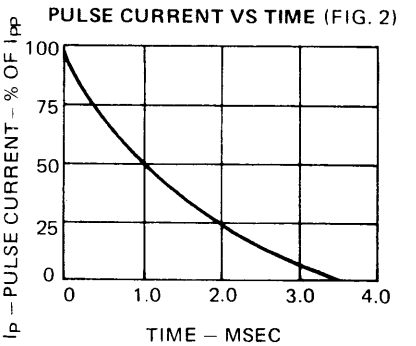


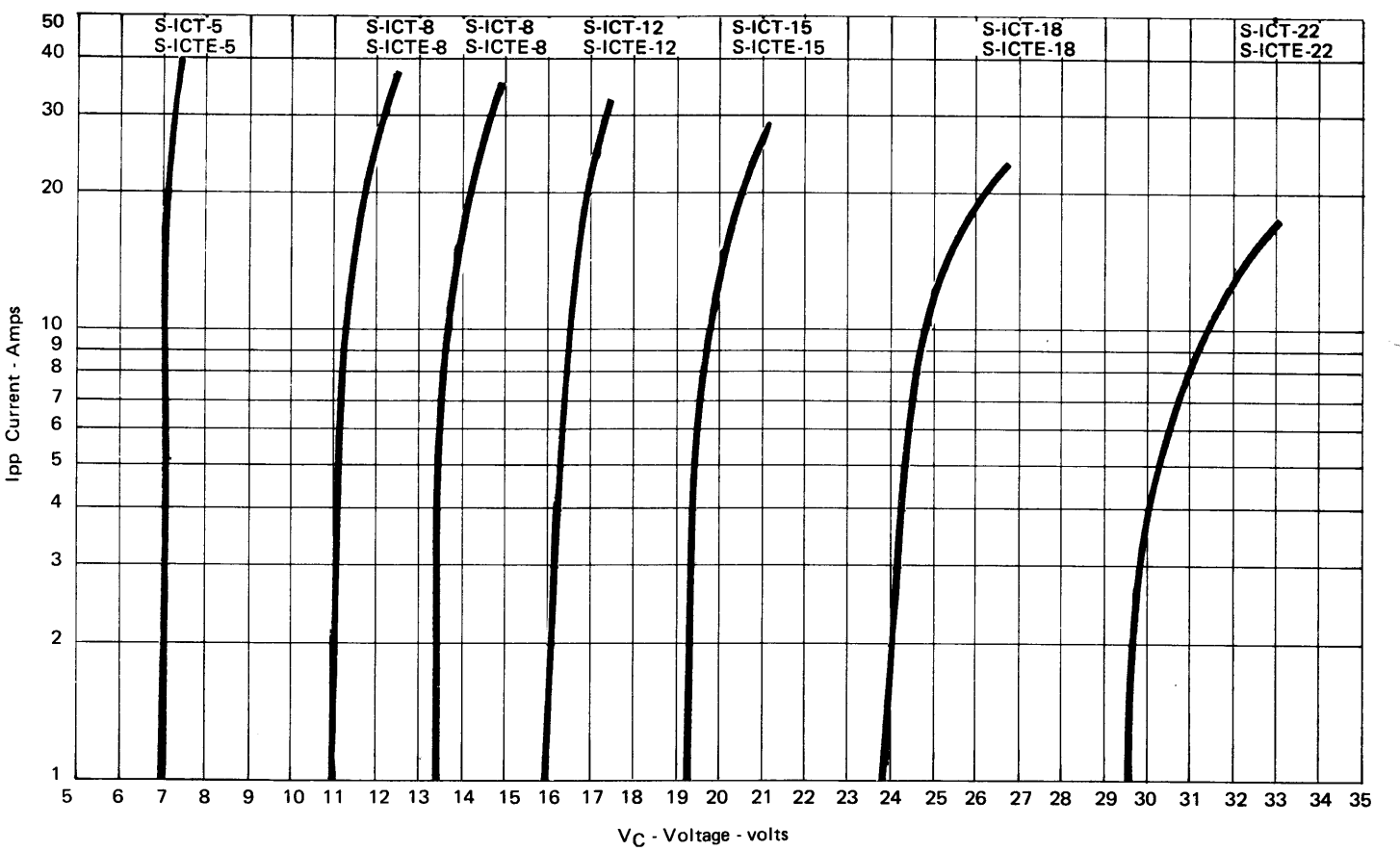
EPOXY MOLDED CASE
POLARITY INDICATED BY BAND OR SYMBOL

MAXIMUM ALLOWABLE PEAK PULSE POWER VS PULSE WIDTH (FIG. 1)



PULSE CURRENT VS TIME (FIG. 2)





Typical Characteristic Clamping Voltage (Vc) vs Peak Pulse Current (Ipp)

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