SA5.0 thru SA170CA

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

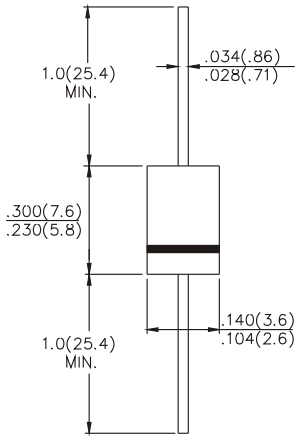
CHENG-YI ELECTRONIC

VOLTAGE 6.8 to 144 VOLTS
400 WATT PEAK POWER
1.0 WATTS STEADY STATE

FEATURES

- Plastic package has Underwrites Laboratory Flammability Classification 94V-O
- Glass passivated chip junction
- 500W Peak Pulse Power capability on 10/1000 μs waveform
- Excellent clamping capability
- Repetition rate (duty cycle):0.01%
- Low incremental surge resistance
- Fast response time: typically less than 1.0 ps from 0 volts to BV for unidirctional and 5.0ns for bidirctional types
- Typical I_D less than 1 μA above 10V
- High tempreature soldering guaranteed: 300°C/10 seconds .375", (9.5mm) lead length/51bs.,(2.3kg) tension

DO-15



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case:JEDEC DO-15 Molded plastic over passivated junction
- Terminals:Plated Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity:Color band denotes positive end (cathode) except Bidirectionals types
- Mounting Position
- Weight:0.015 ounce, 0.4 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATINGS	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 μs waveform (NOTE 1,2,Fig.1)	P_{PPM}	Minimum 5000	Watts
Peak Pulse Current of on 10/1000 μs waveform (NOTE 1,Fig.3)	I_{PPM}	SEE TABLE 1	Amps
Steady Power Dissipation at T_L=75°C Lead Lengths .375",(9.5mm)(NOTE 2)	$P_{M(AV0}$	1.0	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load, unidirrctional only (JEDEC Method)(NOTE 3)	I_{FSM}	70.0	Amps
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-65 to + 175	°C

Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2
2. Measured on copper Leaf area of 1.57 in^2 (40mm^2) per Figure 5
3. 8.3ms single half sine-wave or equivalent square wave, Duty Cycle=4 pulses per minutes maximum.

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RATING AND CHARACTERISTICS CURVES
SA5.0 THRU SA170CA

Fig. 1 - PEAK PULSE POWER VS PULSE TIME

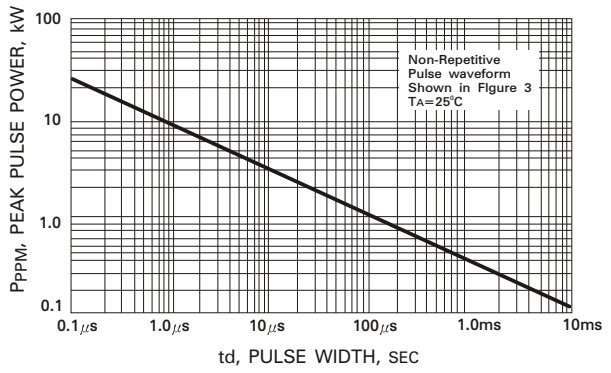

Fig. 2 - PULSE DERATING CURVE

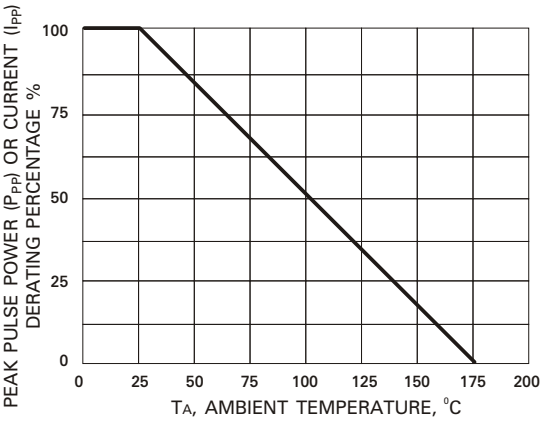

Fig. 3 - PULSE WAVEFORM

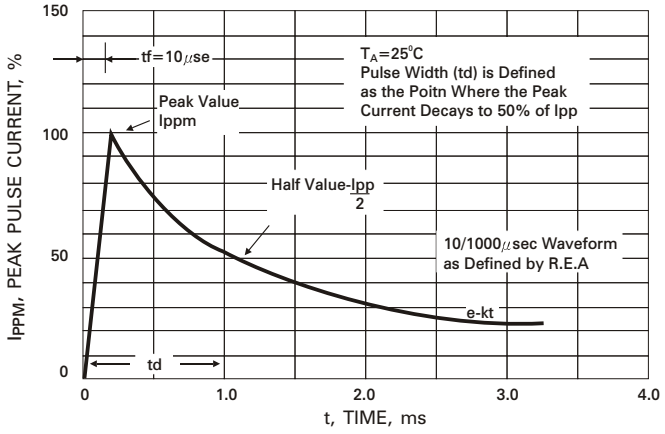

Fig. 4 - TYPICAL JUNCTION CAPACITANCE
UNIDIRECTIONAL

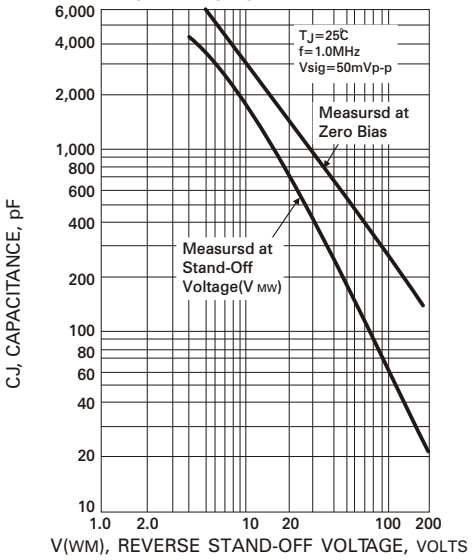

Fig. 5 - STEADY STATE POWER
DERATING CURVE

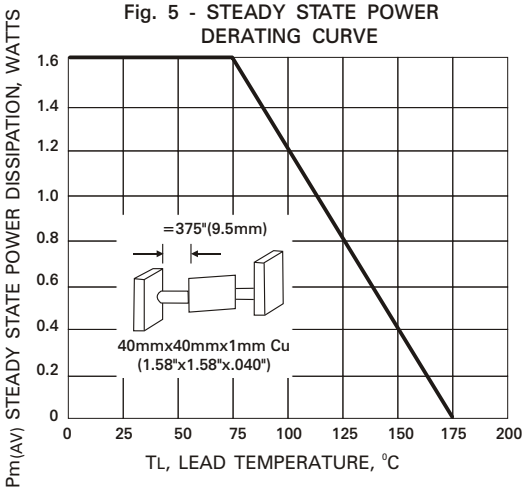

Fig. 6 - MAXIMUM NON-REPETITIVE
PEAK FORWARD SURGE CURRENT