Super Fast Recovery Surface Mounted Rectifiers

Reverse Voltage - 50 to 600 V

Forward Current - 5.0 A

TO-277

FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 250°C/10 seconds at terminals

MECHANICAL DATA

- Case : Molded plastic body
- Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any
- Weight : 0.003 ounce, 0.092 grams

Absolute Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Parameter	Symbols	ES5ASP	ES5BSP	ES5CSP	ES5DSP	ES5FSP	ES5GSP	ES5JSP	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at T_L=100°C	$I_{(AV)}$	5.0							A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage at 5.0A	V_F	1.0				1.3		1.7	V
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage T_A = 25°C / T_A = 125°C	I_R	5.0 / 500							uA
Maxinum reverse recovery time(Note 1)	Trr	35							ns
Typical junction capacitance (Note2)	C_J	60.0							pF
Typical Thermal Resistance	R_{qJA}	47.0							°C/W
Operating junction and storage temperature range	T_j,T_{stg}	-55 ~ +150							°C

Note:

1.Reverse recovery time test condition: IF=0.5A IR=1.0A Irr=0.25A

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

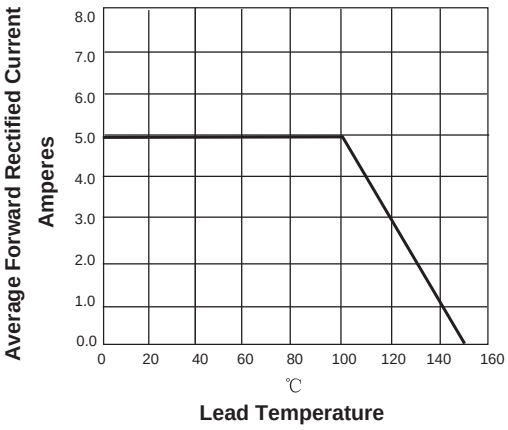


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

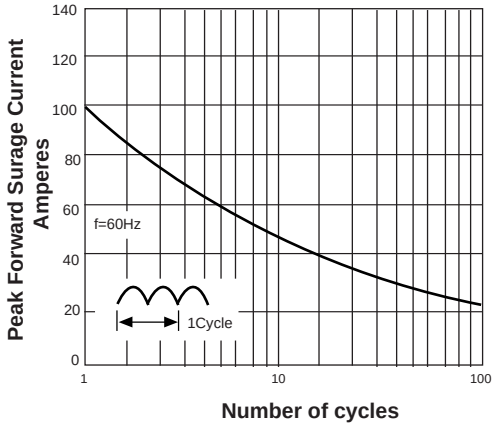


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

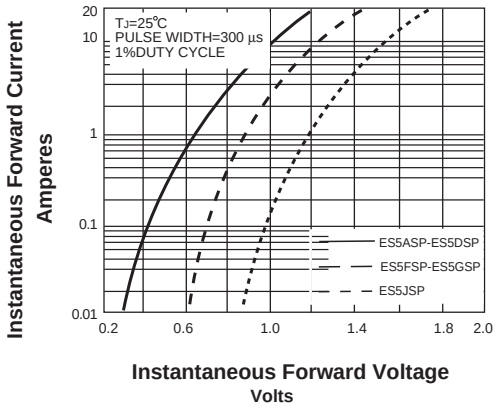
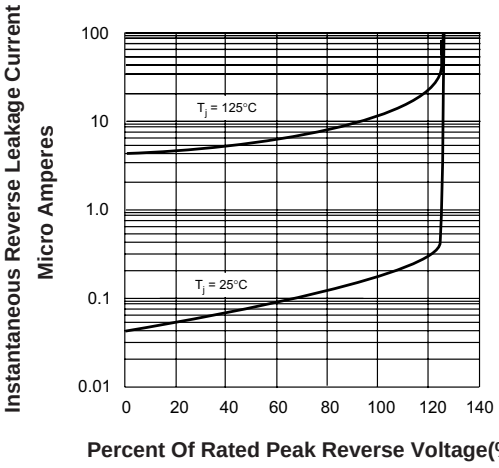
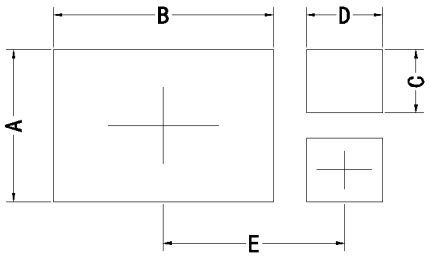


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

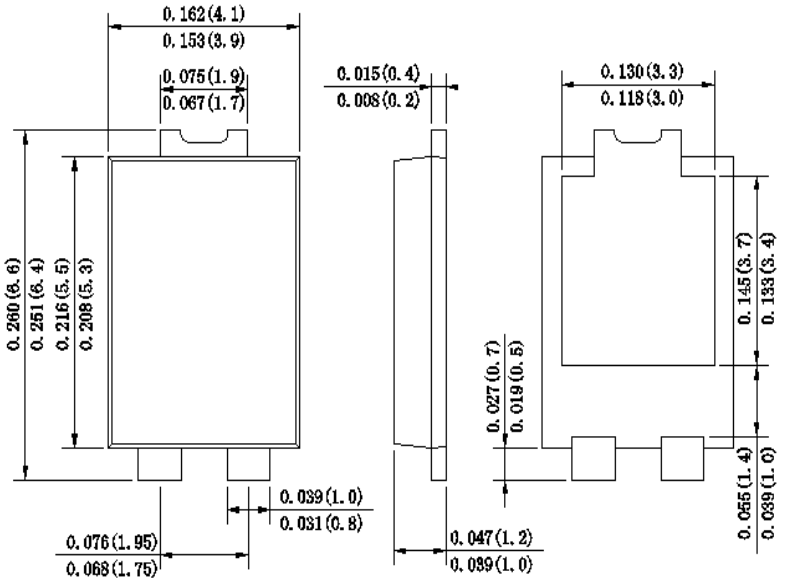


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	3.60	0.142
B	5.35	0.211
C	1.50	0.059
D	1.85	0.073
E	4.30	0.169

Package Outline TO-277



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
TO-277	Tape/Reel,13”reel	5000	EIA-481-1