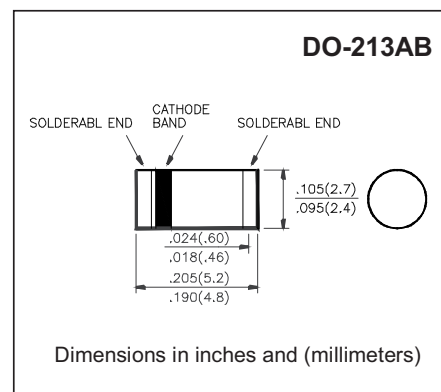


SURFACE MOUNT SUPER FAST RECOVERY RECTIFIERS

FEATURES

- For surface mounted applications
- Glass passivated chip junction
- Low leakage current
- Fast switching
- Plastic package has underwrites laboratory flammability Classification 94V-0
- High temperature soldering guaranteed
250°C/10 seconds at terminals



MECHANICAL DATA

- Case: molded plastic
- Polarity: band indicate cathode
- Mounting position: Any
- Weight: 0.12 grams

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 derate current by 20%.

		SYMBOLS	ESM 1A	ESM 1B	ESM 1C	ESM 1D	ESM 1E	ESM 1G	ESM 1J	UNITS
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage		V _{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at T _T =100℃		I _(AV)	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)		I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A		V _F	0.95				1.25		1.70	Volts
Maximum DC Reverse Current at rated DC Blocking Voltage at	T _A = 25℃	I _R	5.0							μA
	T _A = 125℃		100							
Typical Reverse Recovery Time (NOTE 1)		T _{rr}	35							ns
Typical Junction Capacitance (Note 2)		C _J	15							PF
Typical Thermal Resistance (Note 3)		R _{0JT}	40							℃/W
Operating and Storage Temperature Range		T _J , T _{STG}	-55 to +150							℃

Notes:

1. Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
3. Thermal resistance Junction to terminal 6.0mm² copper pads to each terminal.

SURFACE MOUNT SUPER FAST RECOVERY RECTIFIERS

RATINGS AND CHARACTERISTIC CURVES ESM1A - ESM1J

FIG.1-MAXIMUM FORWARD CURRENT
DERATING CURVE

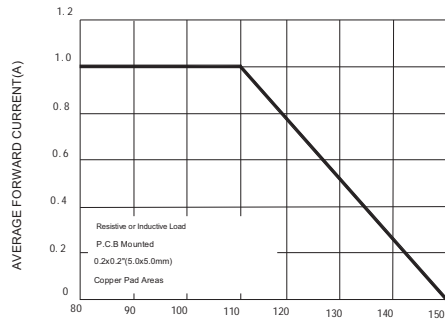


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD
SURGE CURRENT

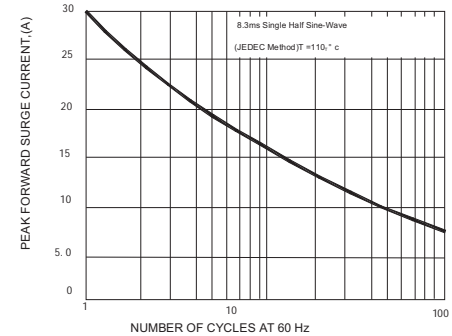


FIG.3-TYPICAL INSTANTANEOUS FORWARD
CHARACTERISTICS

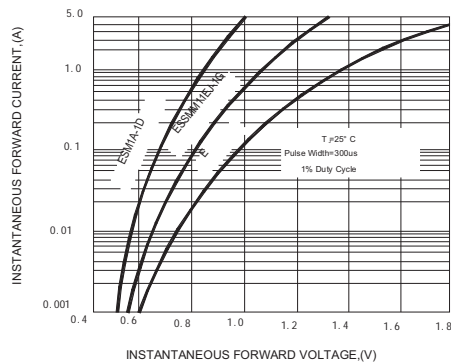


FIG.4-TYPICAL REVERSE LEAKAGE
CHARACTERISTICS

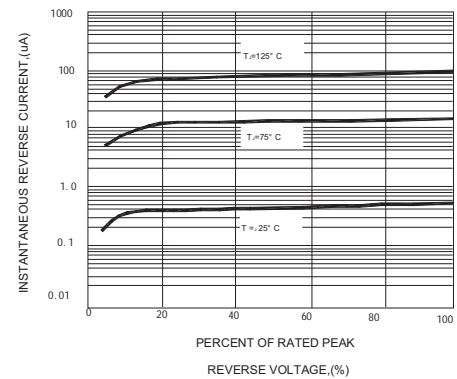


FIG.5-TYPICAL JUNCTION CAPACITANCE

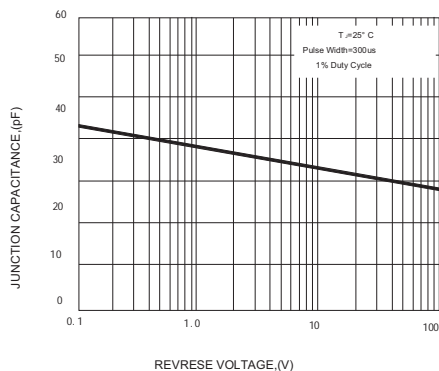
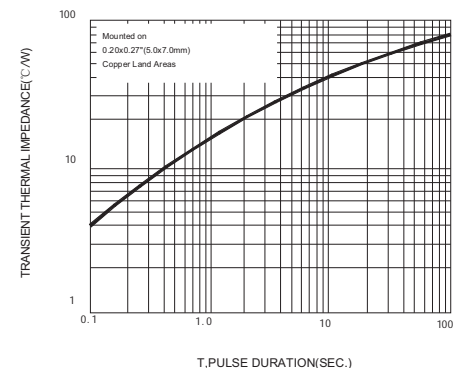


FIG. 6-TRANSIENT THERMAL IMPEDANCE



Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.