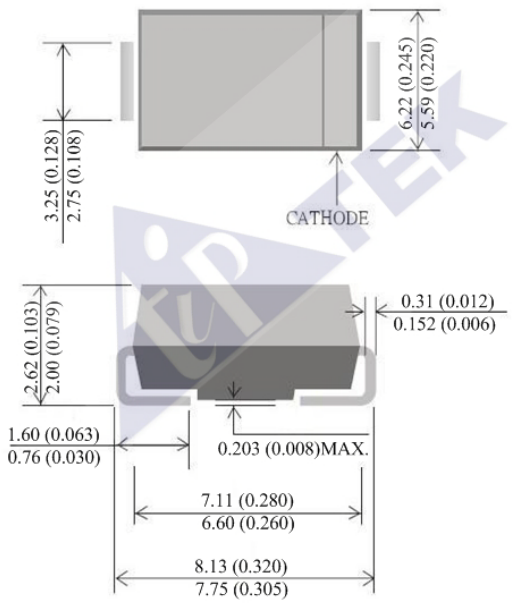
3A SURFACE MOUNT FAST RECOVERY RECTIFIER



CASE：DO-214AB (SMC)

DIMENSIONS IN MILLIMETERS AND (INCHES)

FEATURES

- FOR SURFACE MOUNTED APPLICATIONS
- LOW PROFILE PACKAGE
- BUILT-IN STRAIN RELIEF
- EASY PICK AND PLACE
- PLASTIC MATERIAL USED CARRIES UNDERWRITERS LABORATORY CLASSIFICATION 94 V-0
- FAST SWITHCING
- GLASS PASSIVATED CHIP JUNCTION
- HIGH TEMPERATURE SOLDERING：260℃/10 SECONDS AT TERMINALS

MECHANICAL DATA

- CASE：MOLDED PLASTIC
- TERMINALS：SOLDER PLATED
- POLARITY：INDICATED BY CATHODE BAND
- WEIGHT：0.24 GRAMS
- Pb Free: RS3A~ES3M
  Halogen Free: RS3A-H~ES1M-H

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED.

PARAMETER	SYMBOL	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	200	400	600	800	1000	V
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	140	280	420	560	700	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	200	400	600	800	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT .375″ (9.5mm) LEAD LENGTH AT T_A=90°C	I_O	3.0							A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	100							A
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta JA}$	50							℃/W
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta JL}$	15							℃/W
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150							℃
OPERATING TEMPERATURE RANGE	T_J	-55 TO + 150							℃

ELECTRICAL CHARACTERISTICS (AT T_A =25°C UNLESS OTHERWISE NOTED)

PARAMETER		SYMBOL	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	UNITS
MAXIMUM FORWARD VOLTAGE AT 3A		V_F	1.3							V
MAXIMUM DC REVERSE CURRENT	25℃ 125℃	I_R	5.0 250							μA
TYPICAL JUNCTION CAPACITANCE (NOTE 1)		C_J	60							pF
MAXIMUM REVERSE RECOVERY TIME(NOTE 3)		t_{rr}	150				250	500		ns

NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE 0F 4.0 VOLTS
2. THERMAL RESISTANCE FROM JUNCTION TO TERMINAL 5.0mm^2 (.013 mm THICK) LAND AREAS
3. REVERSE RECOVERY TEST CONDITIONS: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

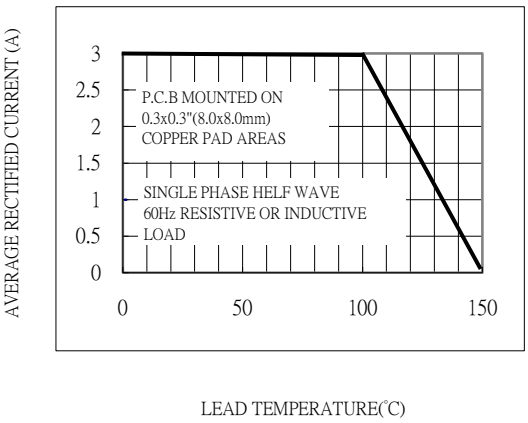


Fig.1-MAXIMUM CURRENT DERATING CURVE

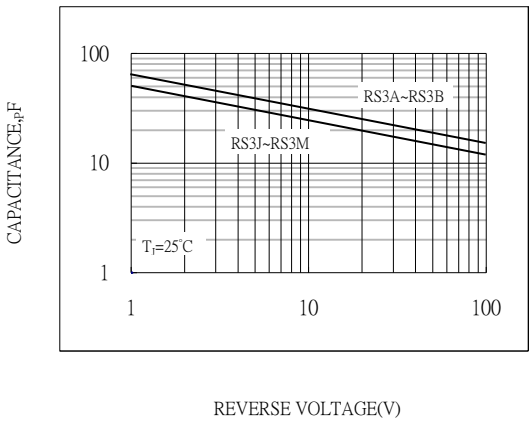


Fig.2-TYPICAL JUNCTION CAPACITANCE

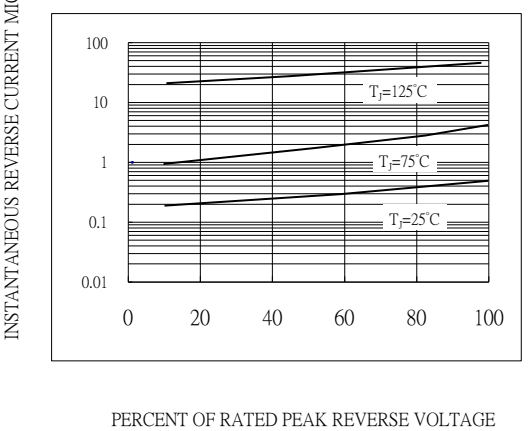


Fig.3-TYPICAL REVERSE CHARACTERISTICS

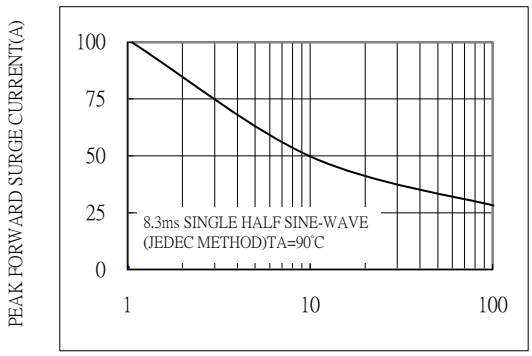


Fig.4-MAXIMUM FORWARD SURGE CURRENT

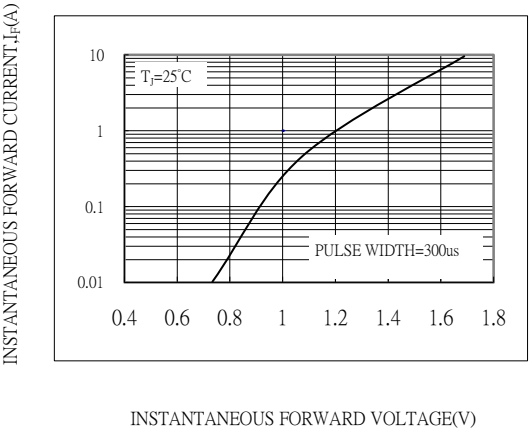


Fig.5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

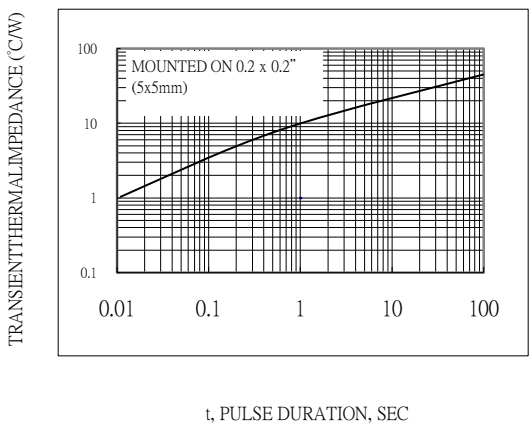


Fig.6-TYPICAL TRANSIENT THERMAL IMPEDANCE