RS5AB THRU RS5MB

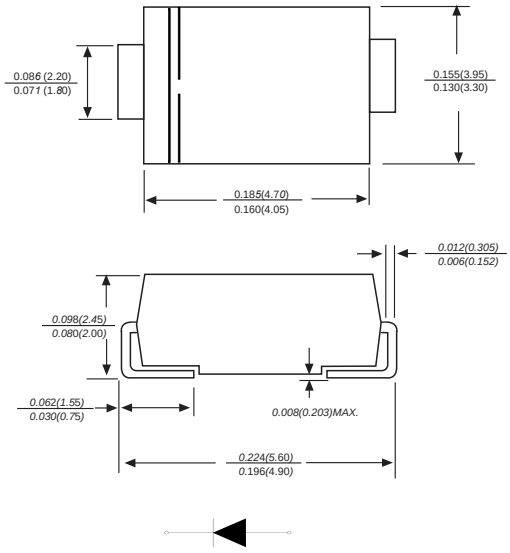
Reverse Voltage - 50 to 1000 Volts Forward Current -5.0 Ampere

SURFACE MOUNT FAST RECOVERY RECTIFIER

Features

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

DO-214AA/SMB RoHS COMPLIANT



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC DO-214AA/SMB Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.003ounce, 0.093grams

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	RS5AB	RS5BB	RS5DB	RS5GB	RS5JB	RS5KB	RS5MB	UNITS
Marking Code		MDD RS5AB	MDD RS5BB	MDD RS5DB	MDD RS5GB	MDD RS5JB	MDD RS5KB	MDD RS5MB	
Maximum repetitive 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 at TL=90℃	$I_{(AV)}$	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method)	I_{FSM}	135							A
Maximum instantaneous forward voltage at 5.0A	V_F	1.30							V
Maximum DC reverse current T_A=25℃ at rated DCblocking voltage T_A=125℃	I_R	10.0 150.0							μA
Maximum reverse recovery time (NOTE 1)	trr	150				250	500		ns
Typical junction capacitance (NOTE 2)	C_J	45.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	48.0							℃/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150							℃

Note:1.Reverse recovery condition I_F=0.5A,I_R=1.0A,Irr=0.25A
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

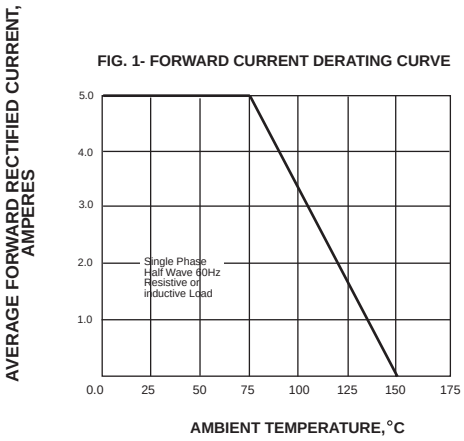


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

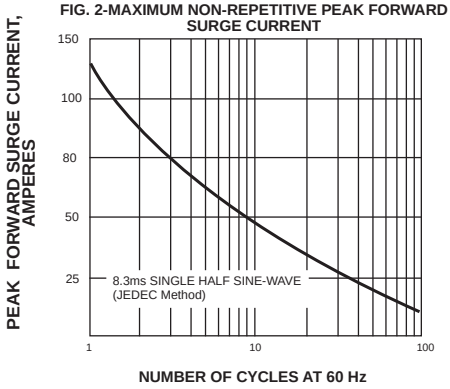


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

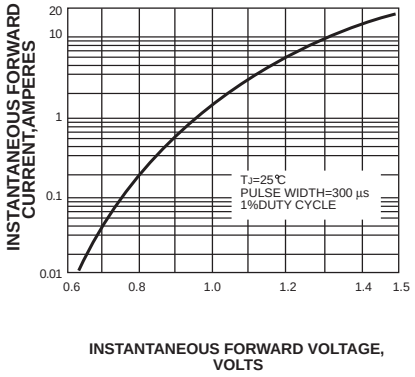


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

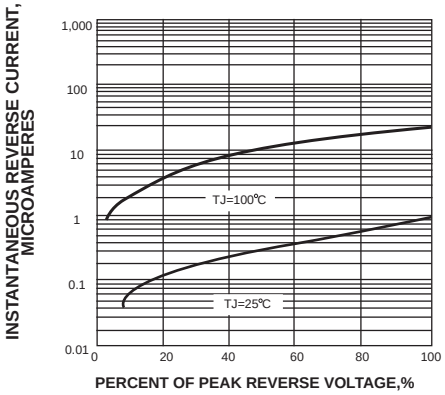


FIG. 5-TYPICAL JUNCTION CAPACITANCE

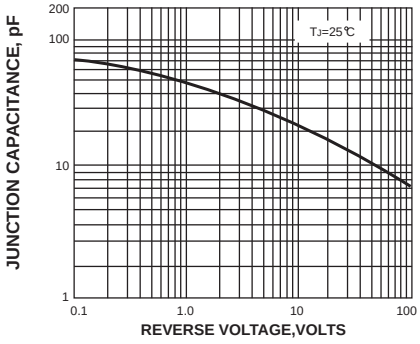
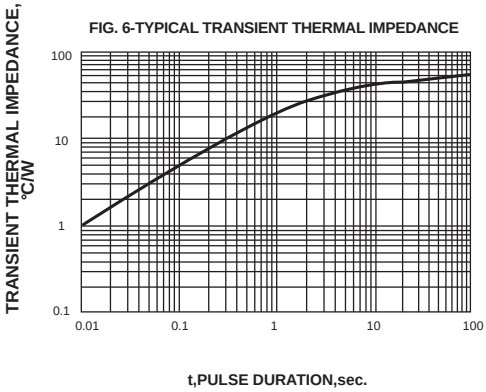
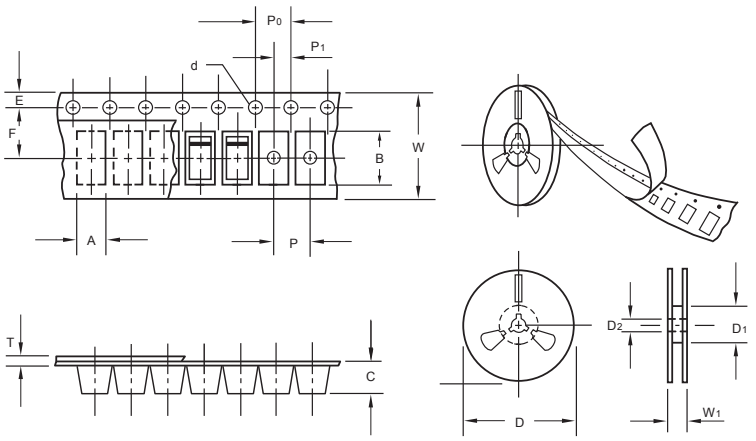


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

Packing information



unit:mm

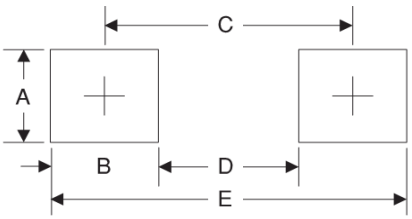
Item	Symbol	Tolerance	SMB
Carrier width	A	0.1	3.81
Carrier length	B	0.1	5.41
Carrier depth	C	0.1	2.42
Sprocket hole	d	0.05	1 5.0
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D_1	min	50.00
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.55
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.1	2.00
Overall tape thickness	T	0.1	0.30
Tape width	W	0.3	12.00
Reel width	W_1	1.0	12.30

Note:Devices are packed in accor dance with EIA standar RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (mm)	BOX (pcs)	INNER BOX (mm)	REEL DIA, (mm)	CARTON SIZE (mm)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMB	13"	3,000	4.0	6,000	340*350*40	330	370*370*370	48,000	14.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.8	0.110
B	2.4	0.094
C	4.6	0.181
D	2.2	0.086
E	7.0	0.276