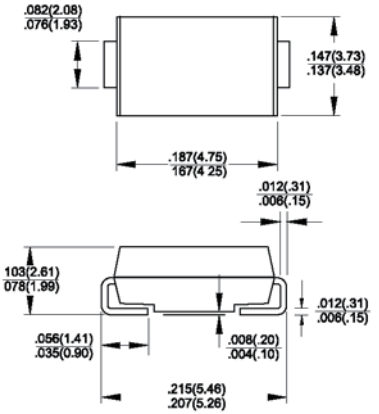
High Efficient Surface Mount Rectifiers
Reverse Voitage 50 to 1000 Volts Forward Current 2.0 Amperes

Features

- ◆ Glass passivated junction chip
- ◆ For surface mounted application
- ◆ Low profile package
- ◆ Built-in strain relief
- ◆ Ideal for automated placement
- ◆ Easy pick and place
- ◆ Superfast recovery time for high efficiency
- ◆ Glass passivated chip junction
- ◆ High temperature soldering: 250°C/10 seconds at terminals
- ◆ Plastic material used carries Underwriters Laboratory Classification 94V-O

DO-214AA (SMB)



Dimensions in inches and (millimeters)

Mechanical Data

- ◆ Cases: Molded plastic
- ◆ Terminals: Solder plated
- ◆ Polarity: Indicated by cathode band
- ◆ Weight: 0.003 ounce, 0.093 gram

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%

Parameter	Symbols	HS2A	HS2B	HS2D	HS2F	HS2G	HS2J	HS2K	HS2M	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum average forward rectified current See Fig.2	$I_{(AV)}$	2.0								Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0								Amps
Maximum instantaneous forward voltage @ 2.0A	V_F	1.0				1.3	1.7			Volts
Maximum DC reverse current @ T_A=25°C at rated DC blocking voltage @ T_A=100°C	I_R	5.0 100								uA uA
Maximum reverse recovery time (Note 1)	t_{rr}	50					75			nS
Typical junction capacitance (Note 2)	C_J	50					30			pF
Operating junction temperature range	T_J	-55 to +150								°C
Storage temperature range	T_{STG}	-55 to +150								°C

Notes 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1 0A, I_{RR}=0 25A
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

RATINGS AND CHARACTERISTIC CURVES

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

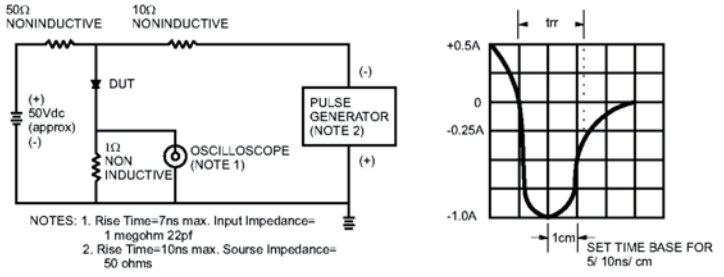


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

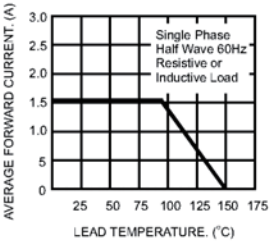


FIG.3- TYPICAL REVERSE CHARACTERISTICS

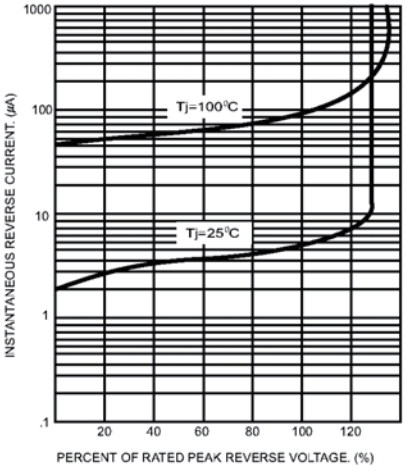


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

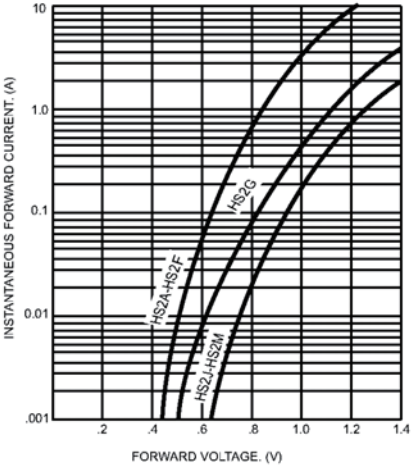


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

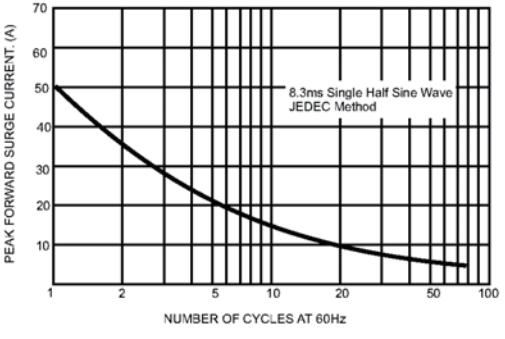


FIG.6- TYPICAL JUNCTION CAPACITANCE