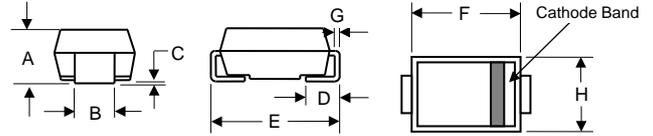


Features

- * Glass passivated junction chip
- * Ideal for automated placement
- * Low forward voltage drop
- * Low profile package
- * Fast switching for high efficiency



RoHS
COMPLIANT



Mechanical Data

- * Case: DO-214AB (SMC)
- * Molding compound, UL flammability classification rating 94V-0
Moisture sensitivity level: level 1, per J-STD-020
- * Terminal: Matte tin plated leads, solderable per JESD22-B102
Meet JESD 201 class 2 whisker test
- * Polarity: Indicated by cathode band

SMA				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.079	0.103	2.06	2.62
B	0.114	0.126	2.90	3.20
C	---	0.008	---	0.203
D	0.030	0.060	0.76	1.52
E	0.305	0.320	7.75	8.13
F	0.260	0.280	6.60	7.11
G	0.006	0.012	0.152	0.305
H	0.220	0.245	5.59	6.22

Maximum Ratings and Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER		SYMBOL	US5A	US5B	US5D	US5F	US5G	US5J	US5K	US5M	Unit
Maximum repetitive peak reverse voltage		V _{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage		V _{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage		V _{DC}	50	100	200	300	400	600	800	1000	V
Maximum average forward rectified current		I _{F(AV)}	5								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load		I _{FSM}	150								A
Maximum instantaneous forward voltage (Note 1)	I _F =3A	V _F	-			-		1.35			V
	I _F =5A		1			1.3		1.7			
Maximum reverse current @ rated VR	T _J =25°C	I _R	10								μA
	T _J =125°C		250								
Maximum reverse recovery time (Note 2)		trr	50					75		ns	
Typical junction capacitance (Note 3)		C _J	80					50		pF	
Typical thermal resistance		R _{θJA}	60								°C/W
Operating junction temperature range		T _J	- 55 to +150								°C
Storage temperature range		T _{STG}	- 55 to +150								°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Note 3: Measured at 1 MHz and Applied VR=4.0 Volts

Ratings and Characteristic Curves

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

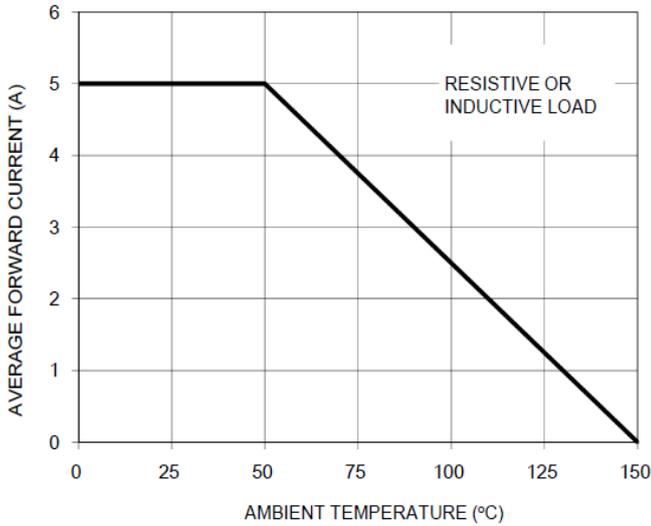


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

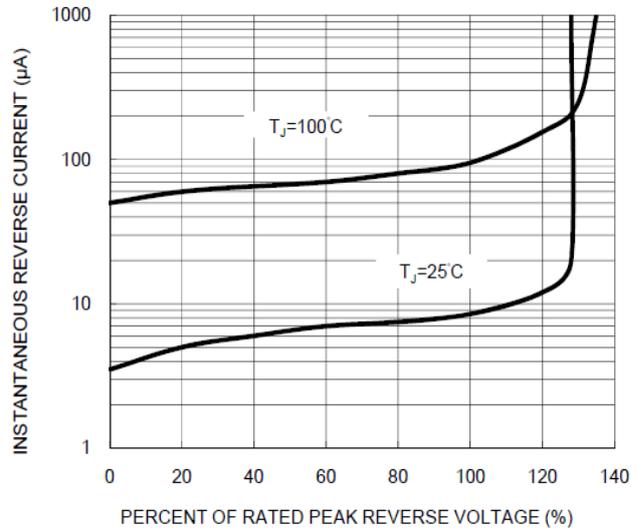


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

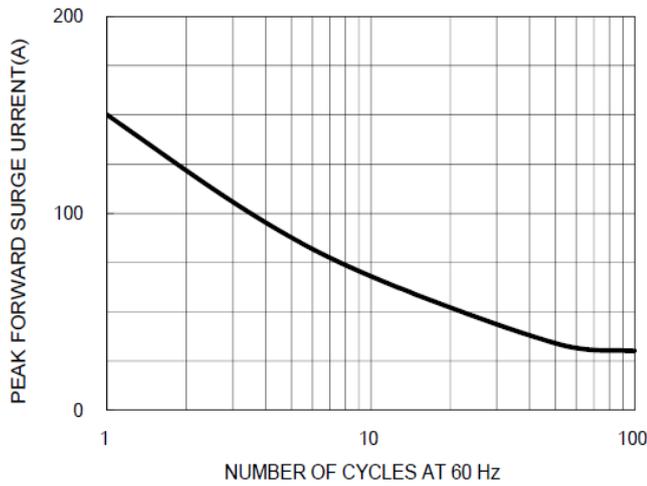


FIG. 4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

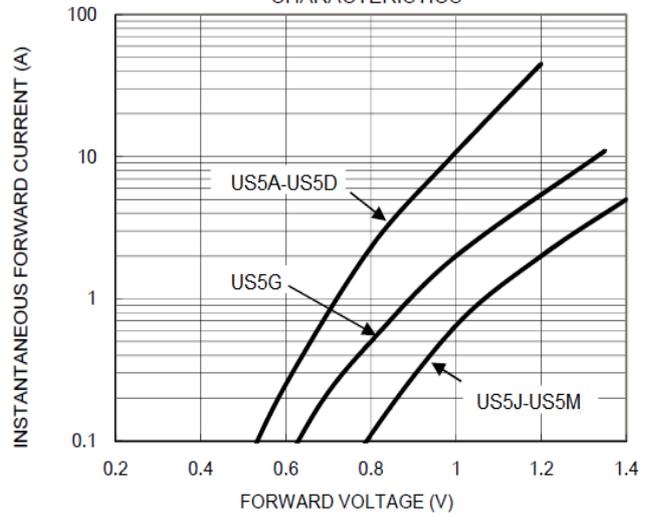


FIG. 5 TYPICAL JUNCTION CAPACITANCE

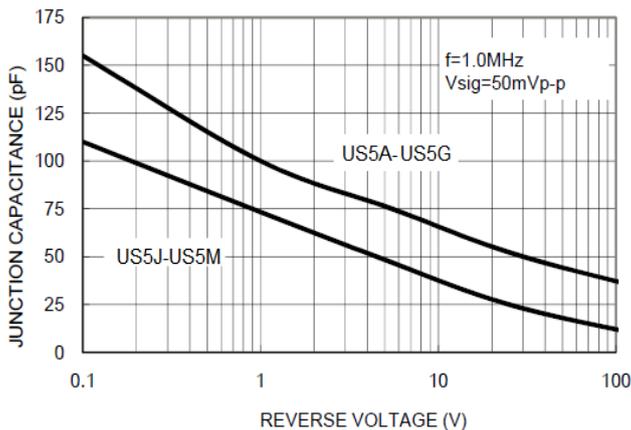
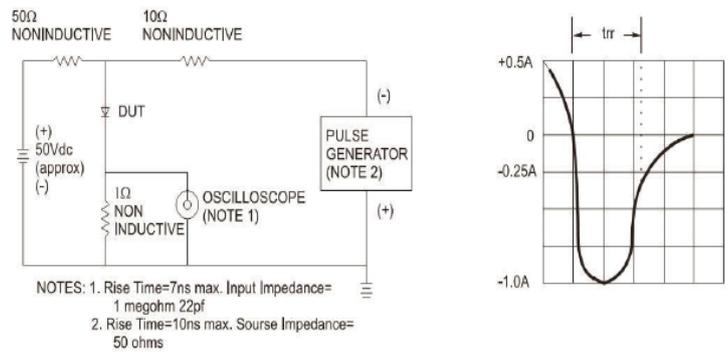


FIG. 6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





US5A THRU US5M

High Efficient Surface Mount Rectifiers

Ordering Information

Part No.	Package	Packing Code	Packing
US5A THRU US5M	SMC	R30	3000pcs/Reel

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