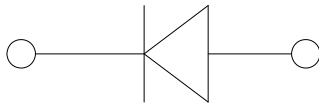
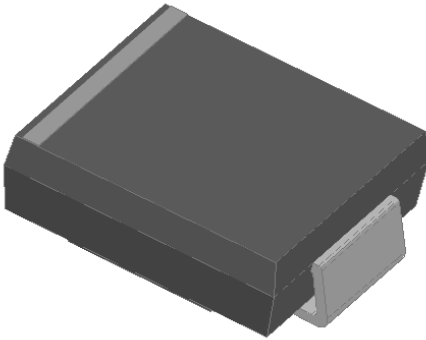


## Surface Mount Fast Recovery Rectifier



### Features

- High current capability
- High reliability
- High surge current capability
- Low power loss
- Solder dip 260 °C max. 10 s, per JESD 22-B106

### Mechanical Data

- **Package:** DO-214AB (SMC)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end

### ■ Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GR5A	GR5B	GR5D	GR5G	GR5J	GR5K	GR5M
Device marking code			GR5A	GR5B	GR5D	GR5G	GR5J	GR5K	GR5M
Repetitive Peak Reverse Voltage	$V_{RRM}$	V	50	100	200	400	600	800	1000
Average Rectified Output Current @60Hz sine wave, Resistance load, TL (FIG.1)	$I_O$	A	5.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta=25°C	$I_{FSM}$	A	120						
Storage Temperature	$T_{stg}$	°C	-55 ~+150						
Junction Temperature	$T_j$	°C	-55 ~+150						

### ■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GR5A	GR5B	GR5D	GR5G	GR5J	GR5K	GR5M
Maximum instantaneous forward voltage drop per diode	$V_F$	V	$I_{FM}=5.0A$	1.3						
Maximum reverse recovery time	$T_{RR}$	ns	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$	150			250		500	
Maximum DC reverse current at rated DC blocking voltage per diode	$I_R$	$\mu A$	Ta=25°C	5						
			Ta=125°C	100						
Typical junction capacitance	$C_j$	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	40						



# GR5A THRU GR5M

## ■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	GR5A	GR5B	GR5D	GR5G	GR5J	GR5K	GR5M
Thermal Resistance	Junction to ambient	$R_{\theta J-A}$	°C/W	47 <sup>1)</sup>						
	Junction to lead	$R_{\theta J-L}$		13 <sup>1)</sup>						

Note (1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GR5A~GR5M	F1	Approximate 0.254	3000	6000	42000	13" reel

## ■ Characteristics (Typical)

FIG.1: Io-TL Curve

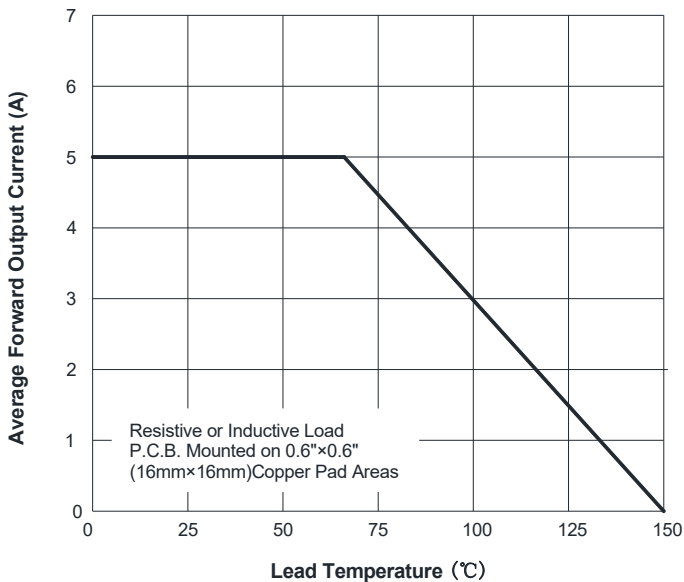


FIG.2: Forward Surge Current Capability

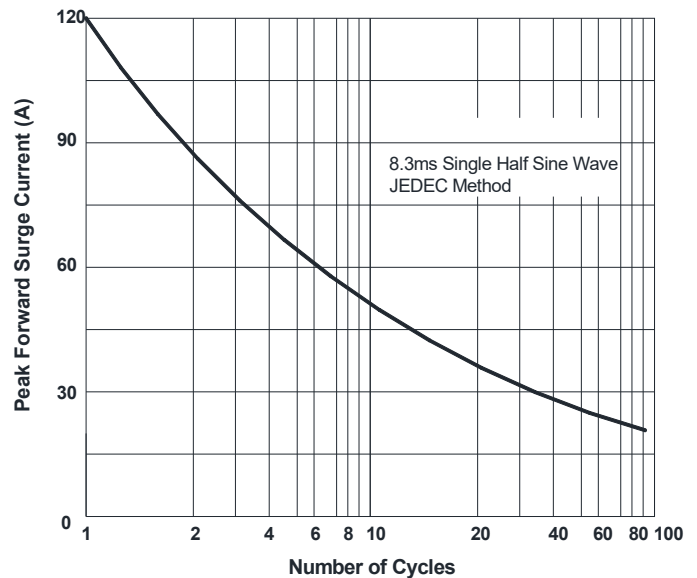


FIG.3: Forward Voltage

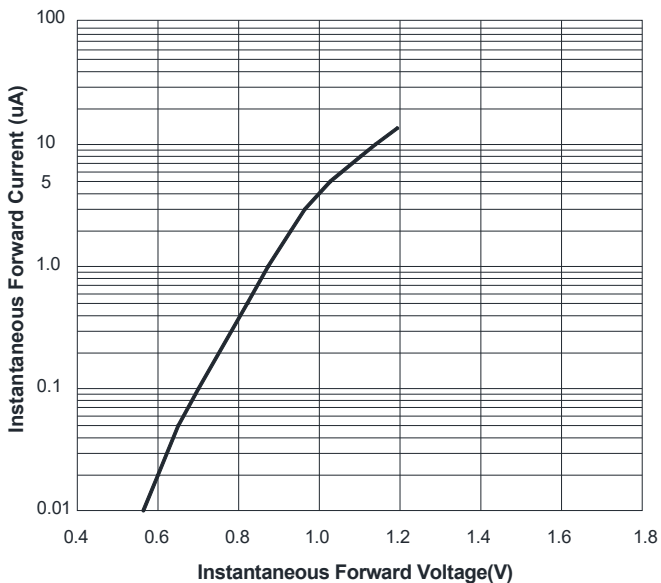


FIG.4: Typical Reverse Characteristics

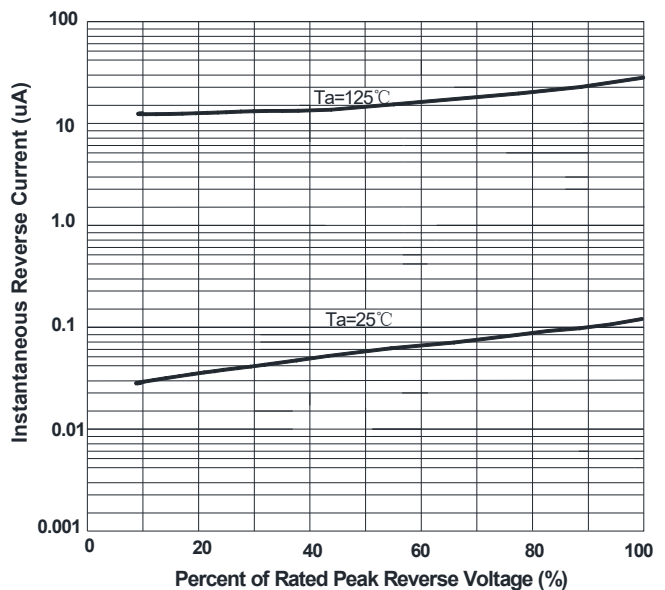
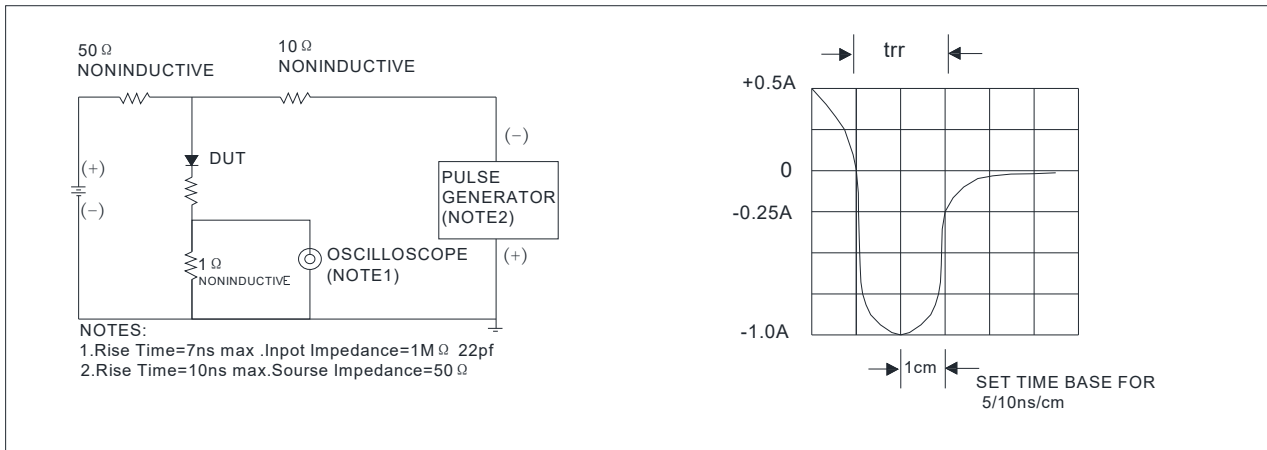
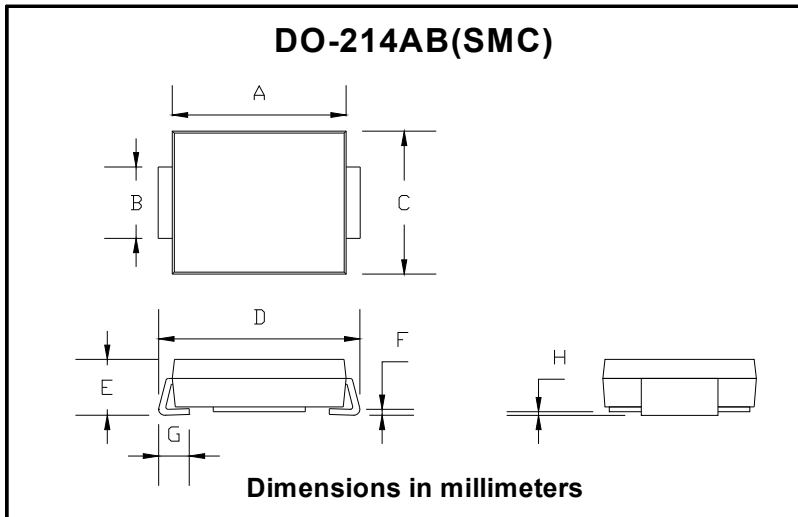


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

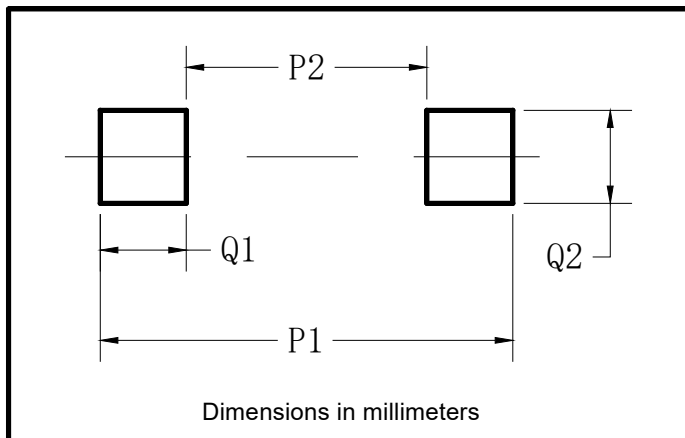


## ■ Outline Dimensions



DO-214AB (SMC)		
Dim	Min	Max
A	6.60	7.11
B	2.85	3.27
C	5.59	6.22
D	7.75	8.13
E	1.99	2.61
F	0.15	0.31
G	0.76	1.52
H	0.10	0.20

## ■ Suggested pad layout



DO-214AB (SMC)	
Dim	Min
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82



## GR5A THRU GR5M

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