MURS420 THRU MURS460

RoHS COMPLIANT

HALOGEN FREE

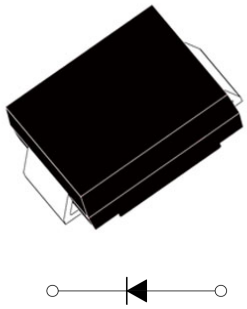
SMCG Plastic-Encapsulate Diodes

Super Fast Recovery Rectifier Diode

Features

- I_O 4A
- VRRM 200V-600V
- Low forward voltage drop
- High surge current capability
- Glass passivated chip junction

SMCG



Mechical Data

- Case:JEDEC DO-214AC molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end

Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	MUR		
				S420	S440	S460
Repetitive Peak Reverse Voltage	V_{RRM}	V		200	400	600
Maximum RMS Voltage	V_{RMS}	V		140	280	420
Maximum DC blocking Voltage	V_{DC}	V		200	400	600
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, T_L=100℃	4.0		
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave,1 cycle, Ta=25℃	125		
Junction Temperature	T_J	℃		-55~+150		
Storage Temperature	T_{STG}	℃		- 55~+150		

Electrical Characteristics (T_a=25℃ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		MUR		
					S420	S440	S460
Peak Forward Voltage	V_{FM}	V	I_{FM}= 4 A		0.89	1.28	
Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$	T_a=25℃	5		
	I_{RRM2}			T_a=125℃	100		
Reverse Recovery time	t_{rr}	ns	I_F=0.5A I_R=1A I_{RR}=0.25A		25	50	
Thermal Resistance(Typical)	$R_{\theta J-A}$	℃/W	Between junction and ambient		47		
	$R_{\theta J-L}$		Between junction and lead		13		
	$R_{\theta J-C}$		Between junction and case		12		

Typical Characteristics

FIG1：Io-TL Curve

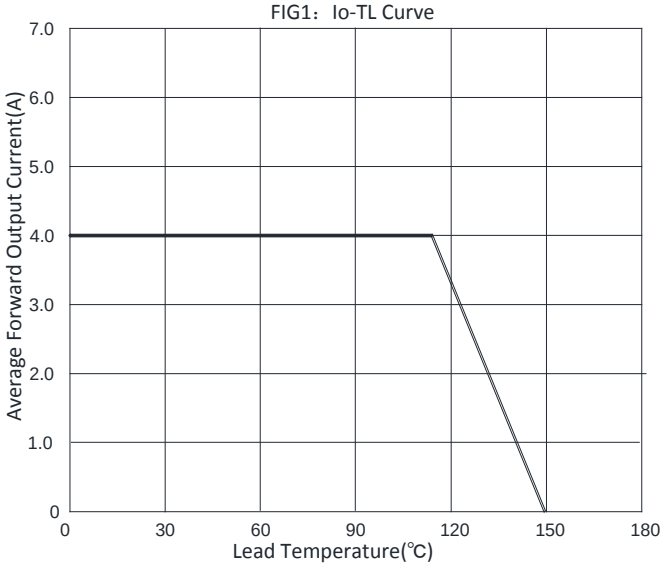


FIG2：Surge Forward Current Capability

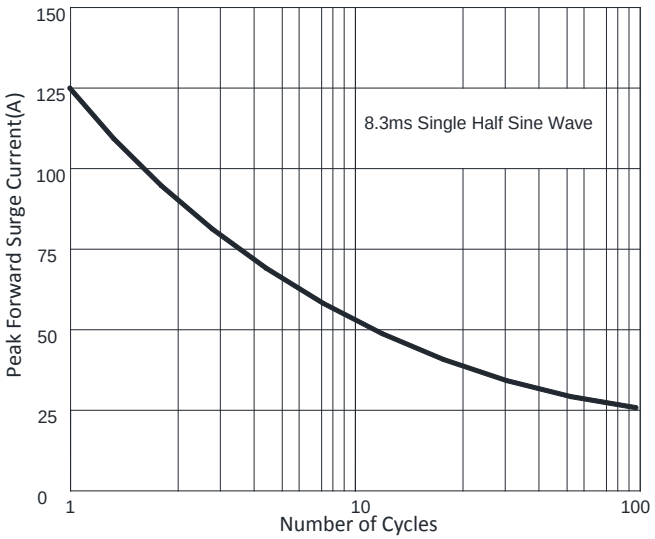


FIG3：Forward Voltage

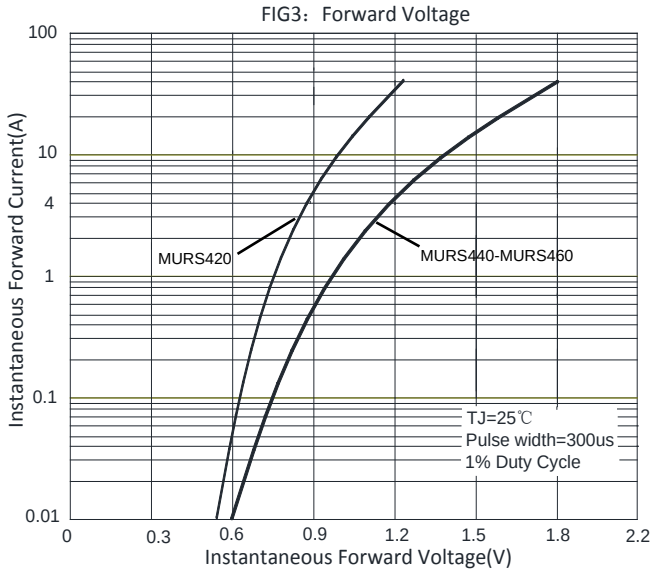


FIG4：Typical Reverse Characteristics

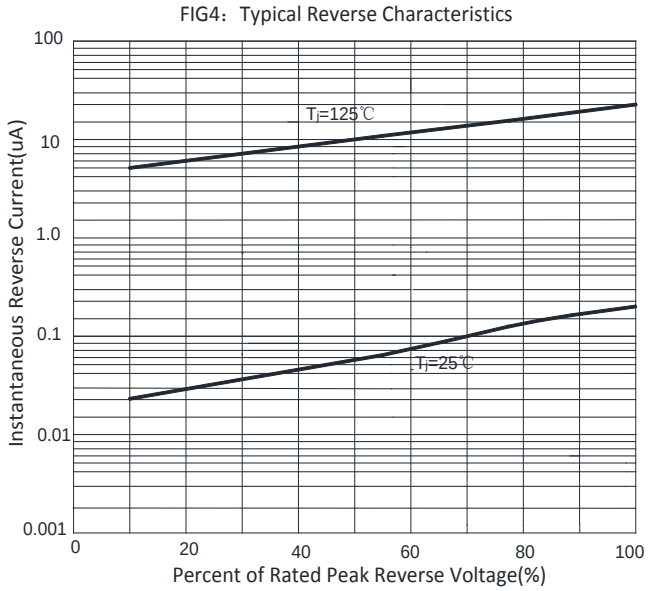
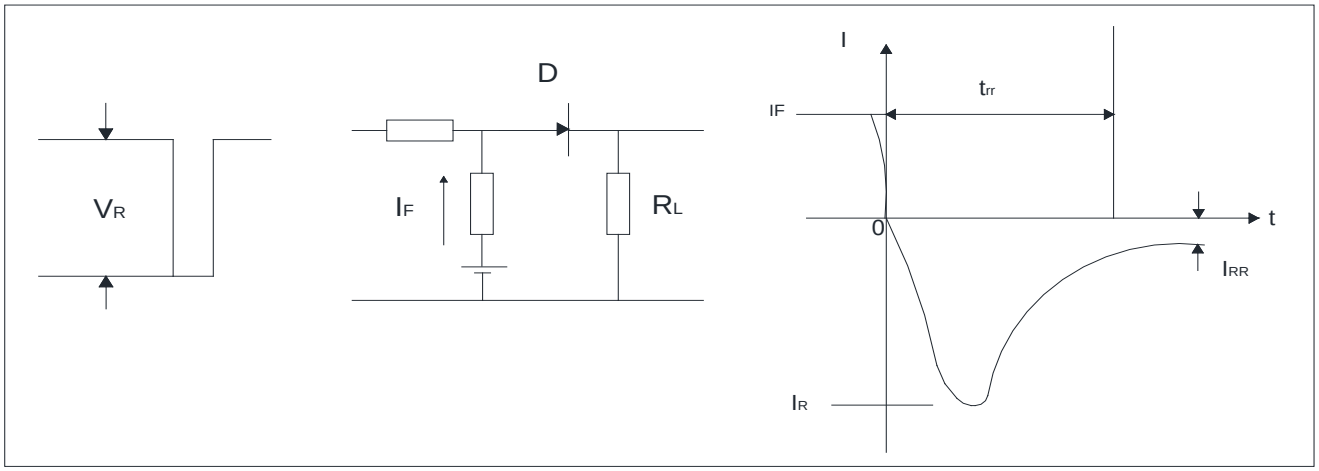
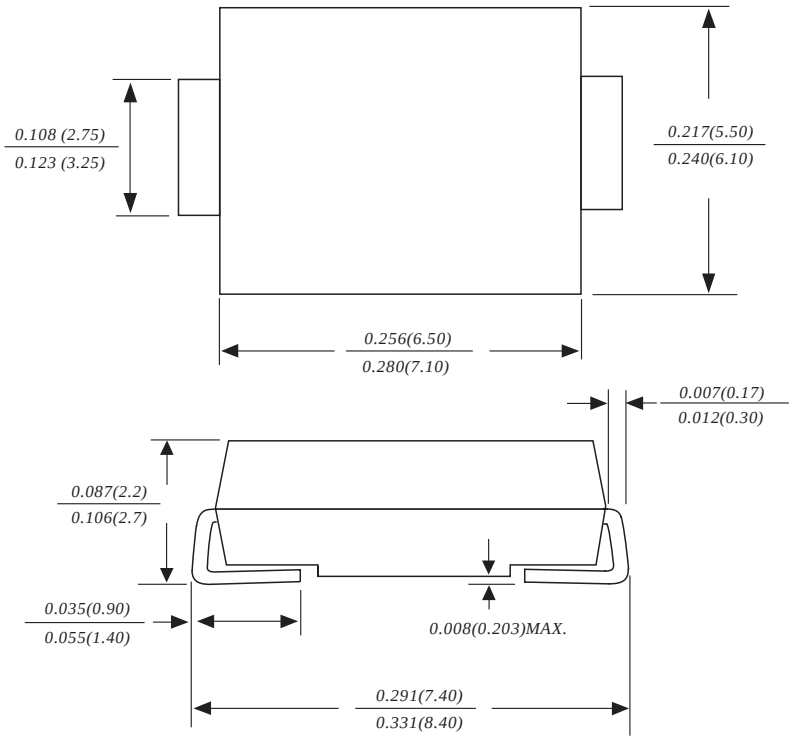


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

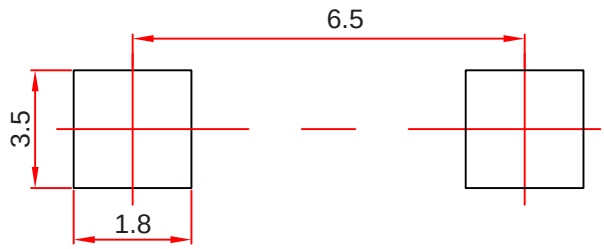


SMCG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMCG Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

Ordering Information

Part Number	Package	Shipping Quantity
MURS420-MURS460	SMCG	3000/tape&Reel

Marking Diagram

XX：From 20 To 60

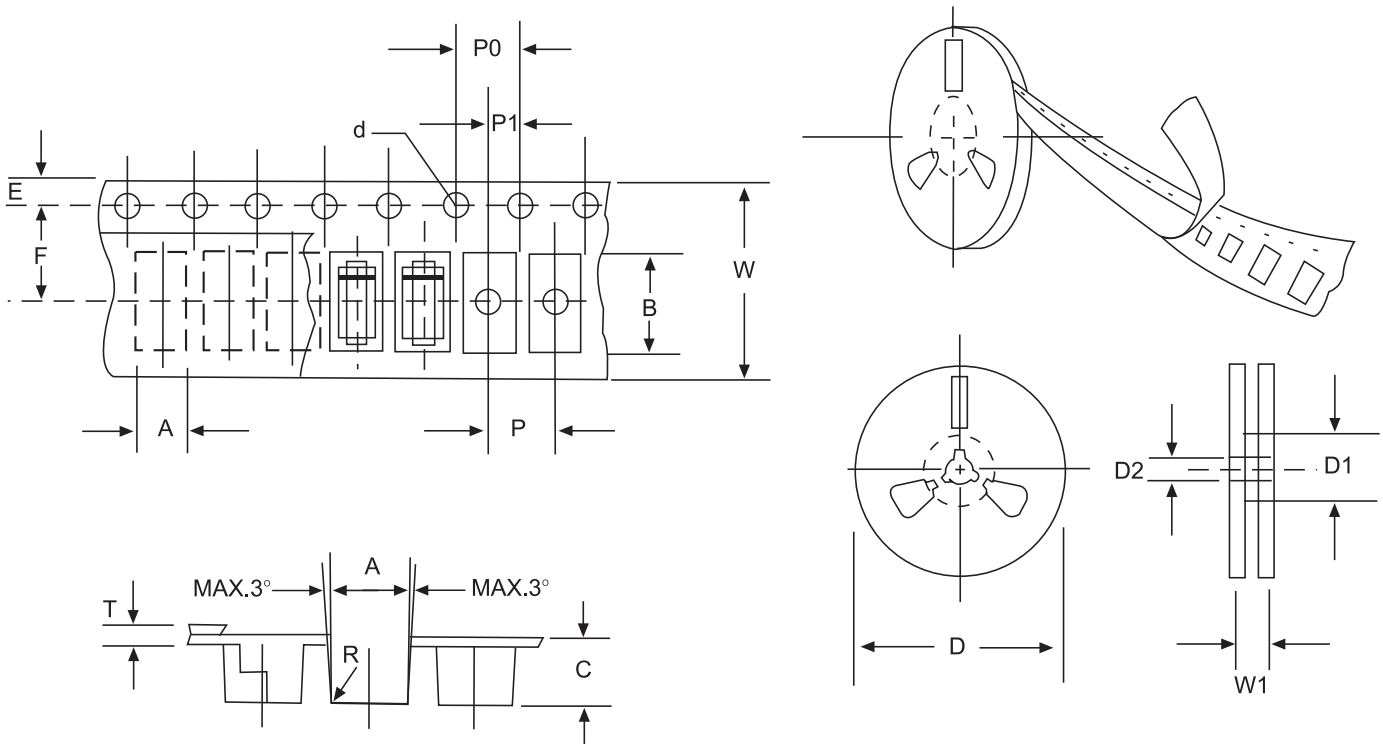


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SMCG mm(inch)
Carrier width	A	6.05±0.1(0.238±0.004)
Carrier length	B	8.31±0.1(0.327±0.004)
Carrier depth	C	2.70±0.1(0.106±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	330±2.0(13±0.079)
Reel inner diameter	D1	75±1.0(2.95±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Stroket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	7.65±0.05(0.301±0.002)
Punch hole pitch	P	8.0±0.1(0.315±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.3±0.1(0.012±0.004)
Tape width	W	16.0±0.2(0.630±0.008)
Reel width	W1	24.0±2.0(0.945±0.079)

NOTE:Devices are packde in accordance with EIA standard RS-481-A and specification given above.