

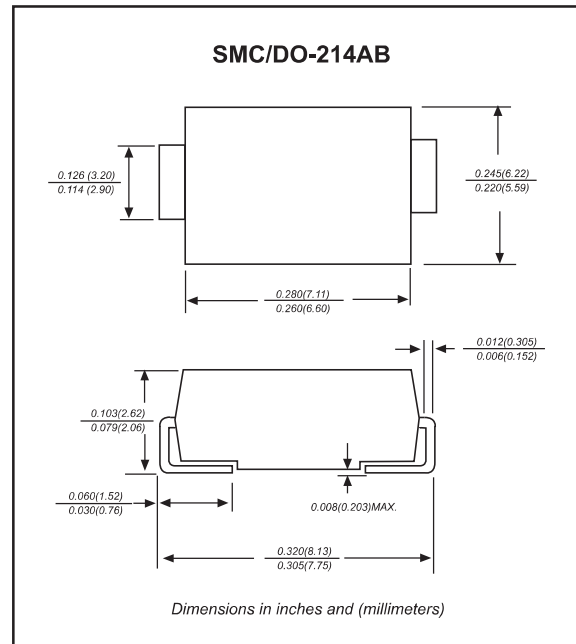
Features

- Fast switching speed.
- Low profile surface mounted application in order to optimize board space.
- Surface mount package ideally suited for automatic insertion.
- Low power loss, high efficiency.
- High forward surge current capability.
- Glass passivated chip junction.
- Lead-free parts meet RoHS requirements.
- Compliant to Halogen-free

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AB/SMC
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I_O			4.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			120	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM}$ $T_A = 100^\circ\text{C}$				50	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		40		$^\circ\text{C/W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		70		pF
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	trr^{*5} (ns)	Operating temperature T_J , ($^\circ\text{C}$)
MURS420-C	200	140	200	0.875	25	
MURS440-C	400	280	400	1.25	50	-55 to +150
MURS460-C	600	420	600			

Note 1. Reverse recovery time test condition, $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@ $I_F=4.0A$
- *5 Maximum Reverse recovery time, note 1

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

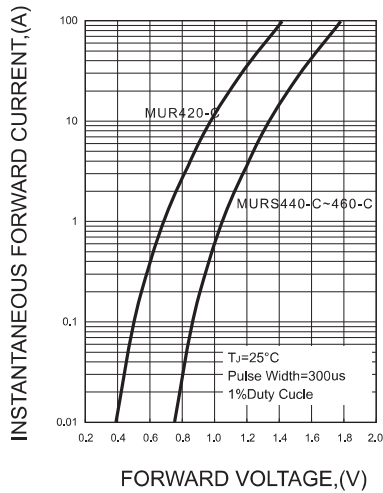


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

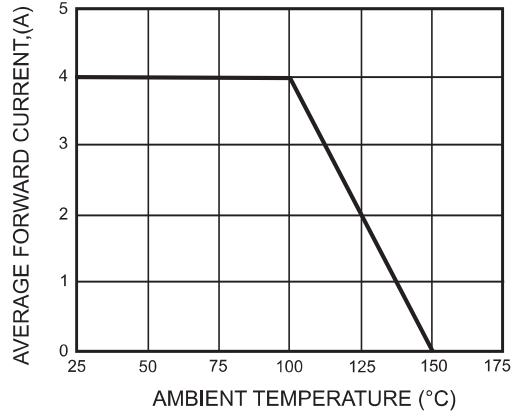
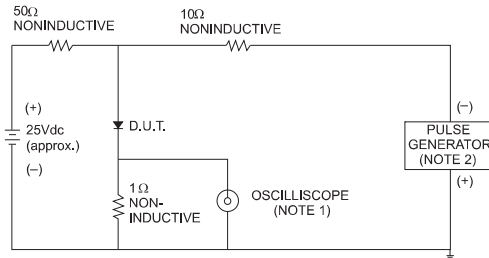


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

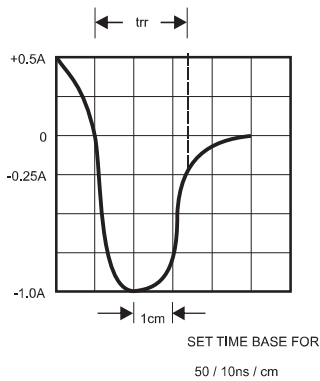


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

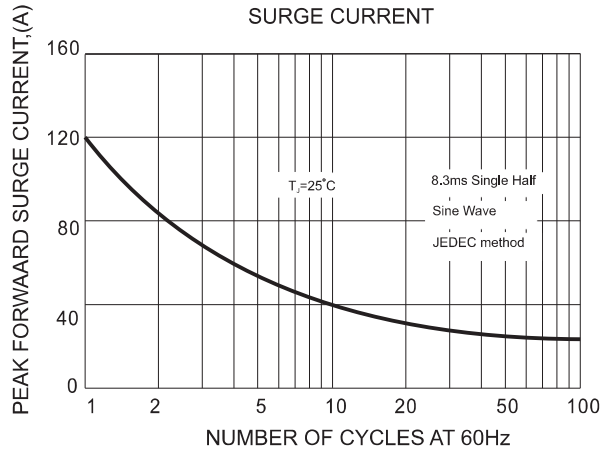
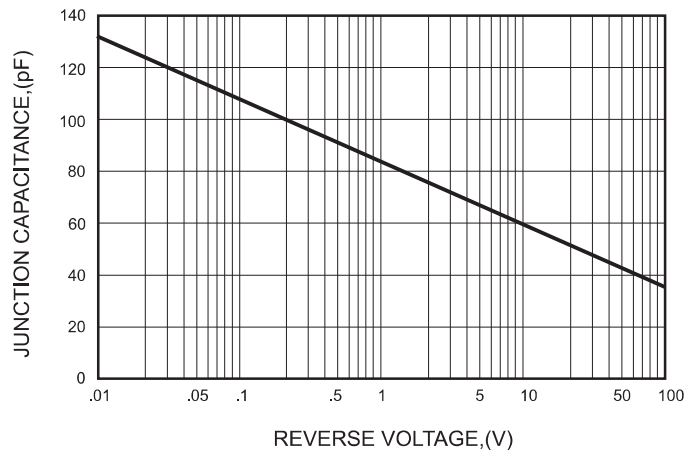




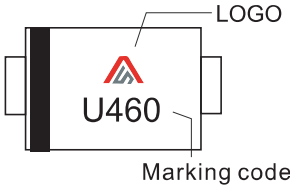
FIG.5-TYPICAL JUNCTION CAPACITANCE



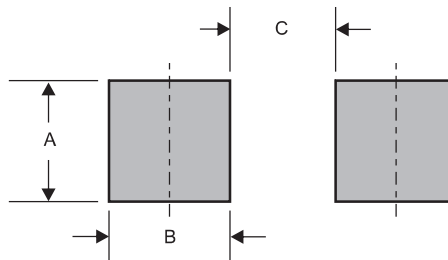
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example
MURS420-C	U420	
MURS440-C	U440	
MURS460-C	U460	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMC	0.132 (3.30)	0.100 (2.50)	0.176(4.40)