



# SD820CS~SD860CS

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**Voltage**

**20~60 V**

**Current**

**8 A**

**TO-252**

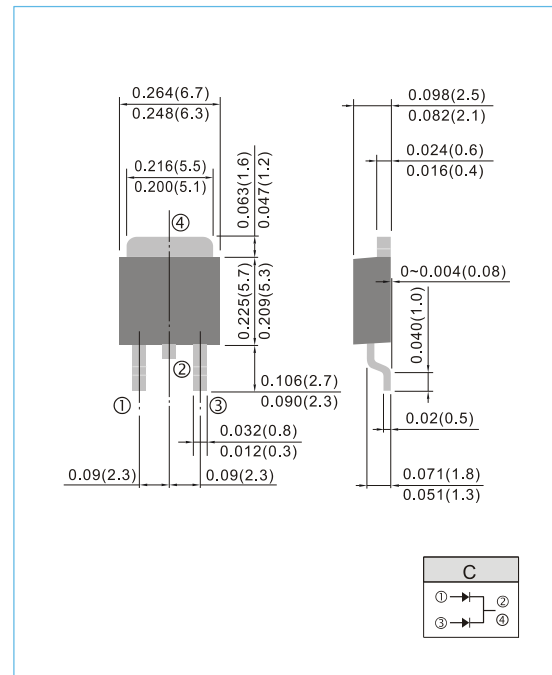
Unit : inch(mm)

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O.
- For surface mounted applications in order to optimize board space
- Low power loss, High efficiency
- High surge capacity
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std..(Halogen Free)

### Mechanical Data

- Case: TO-252 Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marking
- Standard packaging: 16mm tape (EIA-481)
- Approx. Weight: 0.0104 ounces, 0.297 grams
- Marking: Part number



### Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	SD820CS	SD830CS	SD840CS	SD850CS	SD860CS	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	V
Maximum rms voltage	$V_{RMS}$	14	21	28	35	42	V
Maximum dc blocking voltage	$V_R$	20	30	40	50	60	V
Maximum average forward rectified current	$I_{F(AV)}$	8					A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	85					A
Maximum forward voltage at 4A per diode	$V_F$	0.55			0.75		V
Maximum dc reverse current	$I_R$	$T_J=25^{\circ}\text{C}$	0.2			0.1	mA
at rated dc blocking voltage		$T_J=100^{\circ}\text{C}$	20			20	
Typical thermal resistance	$R_{\theta JC}$	5					$^{\circ}\text{C/W}$
	$R_{\theta JA}$	80					
Operating junction temperature range	$T_J$	-55 to +125			-55 to +150		$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150					$^{\circ}\text{C}$



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## RATING AND CHARACTERISTIC CURVES

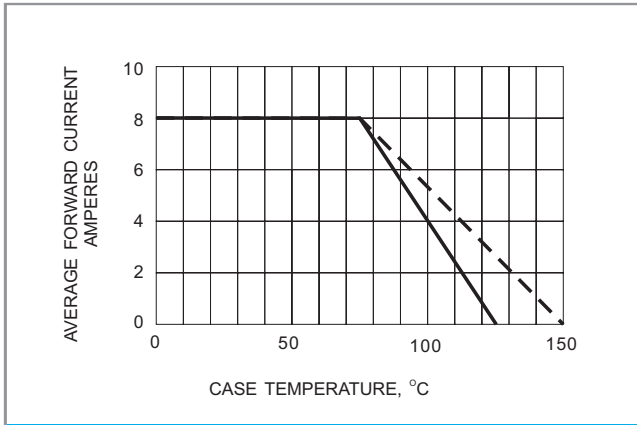


Fig.1- FORWARD CURRENT DERATING CURVE

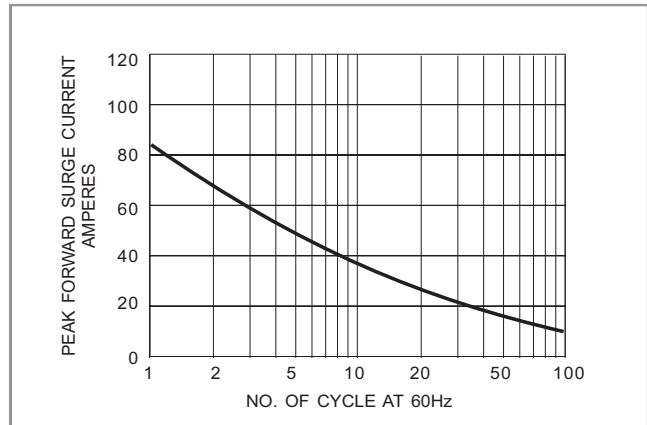


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

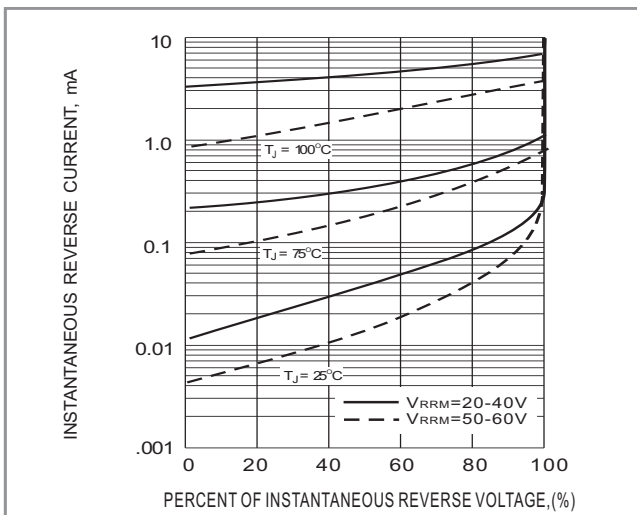


Fig.3- TYPICAL REVERSE CHARACTERISTICS

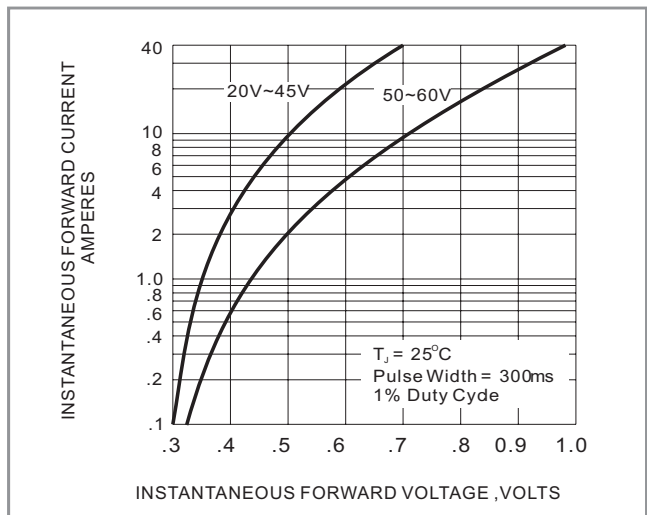
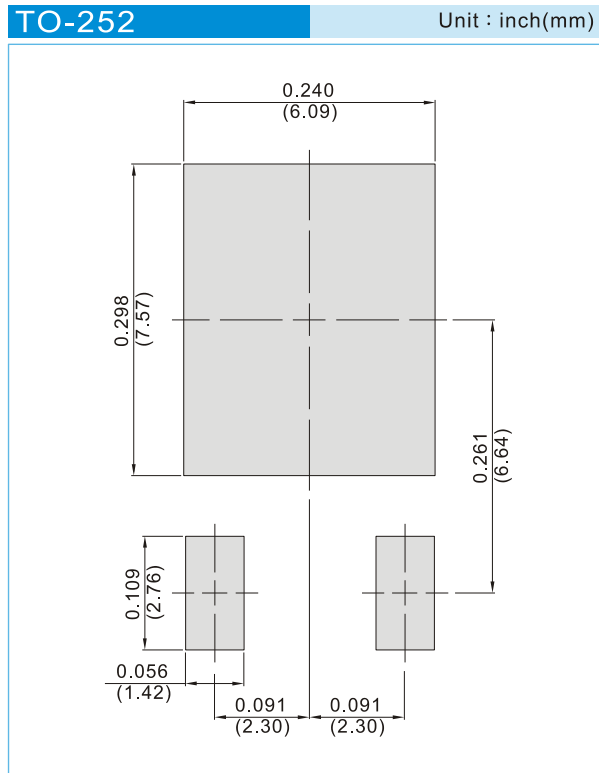


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information  
T/R – 3K per 13" plastic Reel



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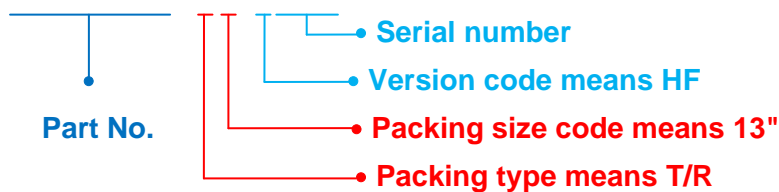
Part No\_packing code\_Version

SD820CS\_L2\_00001

SD820CS\_S2\_00001

For example :

RB500V-40\_R2\_00001



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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