

<b>SUPERFAST RECOVERY RECTIFIERS</b>	<b>REVERSE VOLTAGE - 50 to 600 Volts</b> <b>FORWARD CURRENT - 4.0 Amperes</b>
<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>● Super fast switching time for high efficiency</li> <li>● Low forward voltage drop High current capability</li> <li>● Low reverse leakage current</li> <li>● Plastic material has UL flammability classification 94V-0</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>● Case: JEDEC DO-27 molded plastic</li> <li>● Polarity: Color band denotes cathode</li> <li>● Weight: 0.04 ounces , 1.1 grams</li> <li>● Mounting position: Any</li> </ul>	<p><b>DO-27</b></p> <p style="text-align: center;">Dimensions in inches and (millimeters)</p>

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave ,60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	SF41	SF42	SF43	SF44	SF45	SF46	SF48	UNIT	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	V	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	420	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	V	
Maximum Average Forward Rectified Current @T <sub>A</sub> =55 °C	I(AV)	4.0							A	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I <sub>FSM</sub>	150							A	
Peak Forward Voltage at 4.0A DC(Note1)	V <sub>F</sub>	0.95			1.25		1.3		V	
Maximum DC Reverse Current @T <sub>J</sub> =25°C at Rated DC Bolcking Voltage @T <sub>J</sub> =100°C	I <sub>R</sub>	5.0				100				µA
Maximum Reverse Recovery Time(Note 1)	T <sub>rr</sub>	35			40		50		nS	
Typical Junction Capacitance (Note2)	C <sub>J</sub>	80			60				pF	
Typical Thermal Resistance (Note3)	R <sub>θJA</sub>	15							°C/W	
Operating Temperature Range	T <sub>J</sub>	-55 to +125							°C	
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C	

NOTES: 1. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A.  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC  
 3. Thermal resistance junction to ambient,

FIG. 1 – FORWARD CURRENT DERATING CURVE

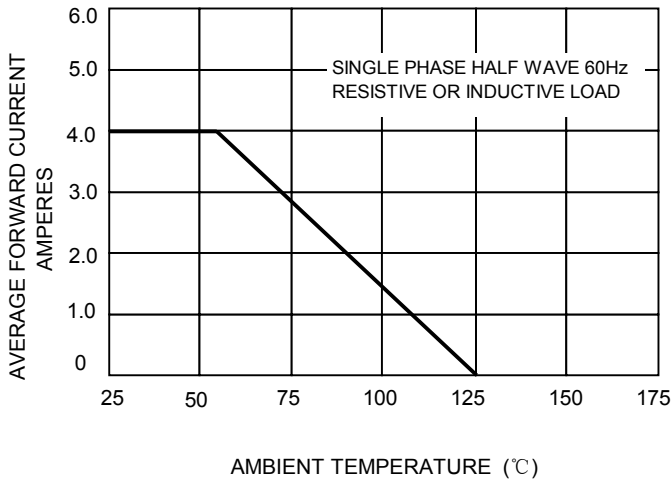


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

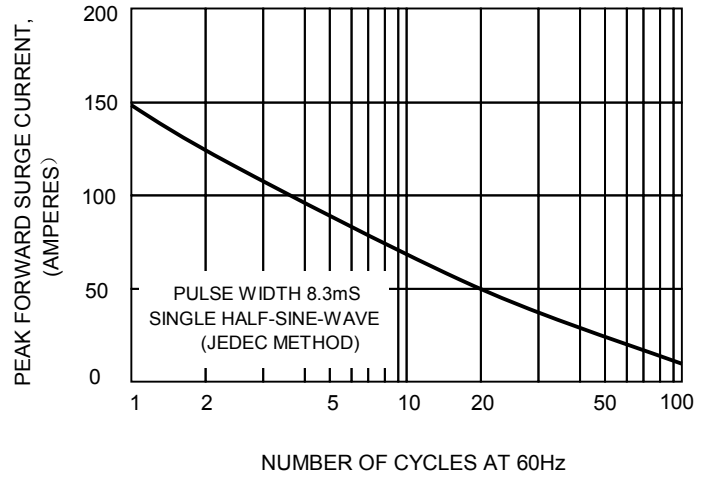


FIG.3 – TYPICAL JUNCTION CAPACITANCE

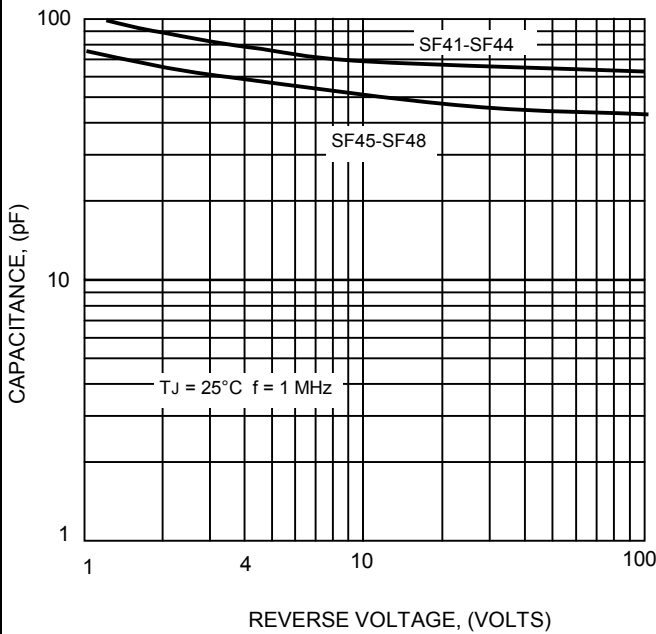


FIG.4-TYPICAL FORWARD CHARACTERISTICS

