

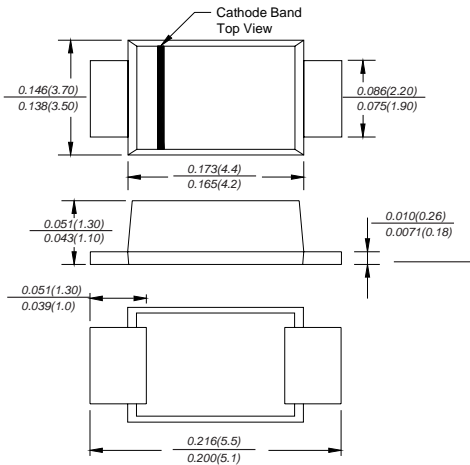


ST54BF THRU ST510BF

SURFACE MOUNT TRENCH SCHOTTKY RECTIFIER

Reverse Voltage - 40 to 100 Volts Forward Current - 5.0 Amperes

SMBF



FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ High efficiency operation
- ◆ Ultra low forward voltage drop, low power losses
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC SMBF molded plastic body
Terminals: leads solderable per MIL-STD-750, Method 2026
Mounting Position: Any
Weight: 57mg/0.002oz

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

MDD Catalog Number	SYMBOLS	ST54BF	ST56BF	ST510BF	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	40	60	100	V	
Maximum RMS voltage	V_{RMS}	28	42	70	V	
Maximum DC blocking voltage	V_{DC}	40	60	100	V	
Maximum average forward rectified current 0.375" (9.5mm) lead length (see fig. 1)	$I_{(AV)}$	5.0			A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100.0	90.0		A	
Maximum instantaneous forward voltage at 5.0A	V_F	0.43	0.50	0.60	V	
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ C$ 0.10	0.05	0.03	mA	
		$T_A=100^\circ C$ 20.0	10.0			
Typical junction capacitance (NOTE 1)	C_J	500			pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	75			°C/W	
Operating junction temperature range	T_J	-55 to +125	-55 to +150		°C	
Storage temperature range	T_{STG}	-55 to +150				°C

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

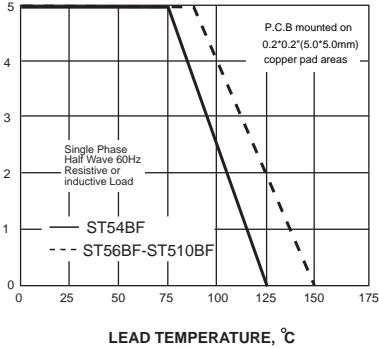


www.microdiese.com

RATINGS AND CHARACTERISTIC CURVES ST54BF THRU ST510BF

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

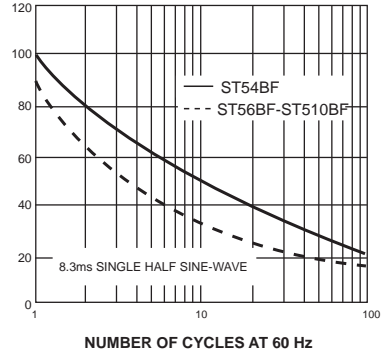
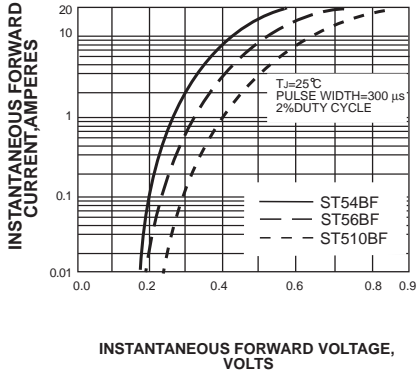


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

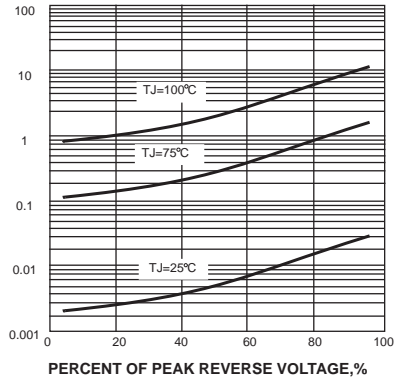
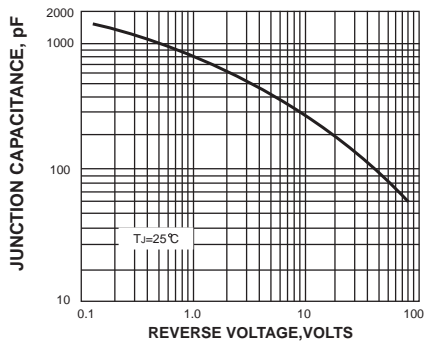
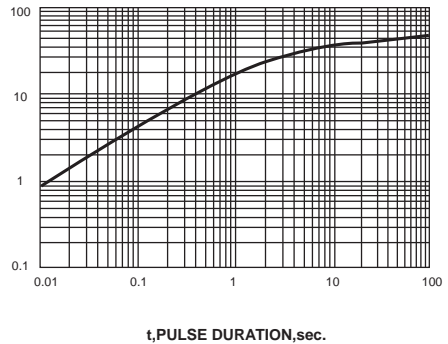


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, $^{\circ}\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Schottky Diodes & Rectifiers](#) category:

Click to view products by [Microdiode Electronics](#) manufacturer:

Other Similar products are found below :

[CUS06\(Te85L,Q,M\)](#) [MA4E2039](#) [D1FH3-5063](#) [MBR0530L-TP](#) [MBR10100CT-BP](#) [MBR30H100MFST1G](#) [MMBD301M3T5G](#) [PMAD1103-LF](#) [PMAD1108-LF](#) [RB160M-50TR](#) [RB520S-30](#) [RB551V-30](#) [DD350N18K](#) [DZ435N40K](#) [DZ600N16K](#) [BAS16E6433HTMA1](#) [BAS 3010S-02LRH E6327](#) [BAT 54-02LRH E6327](#) [IDL02G65C5XUMA1](#) [NSR05F40QNXT5G](#) [NSVR05F40NXT5G](#) [JANS1N6640](#) [SB07-03C-TB-H](#) [SB1003M3-TL-W](#) [SBAT54CWT1G](#) [SBM30-03-TR-E](#) [SBS818-TL-E](#) [SK32A-LTP](#) [SK33A-TP](#) [SK34A-TP](#) [SK34B-TP](#) [SMD1200PL-TP](#) [ACDBN160-HF](#) [SS3003CH-TL-E](#) [STPS30S45CW](#) [PDS3100Q-7](#) [GA01SHT18](#) [CRS10I30A\(Te85L,QM\)](#) [MBR1240MFST1G](#) [MBRB30H30CT-1G](#) [BAS28E6433HTMA1](#) [BAS 70-02L E6327](#) [HSB123JTR-E](#) [JANTX1N5712-1](#) [VS-STPS40L45CW-N3](#) [DD350N12K](#) [SB007-03C-TB-E](#) [SB10015M-TL-E](#) [SB1003M3-TL-E](#) [SK110-LTP](#)