

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - 40 Volts
FORWARD CURRENT - 20 Amperes

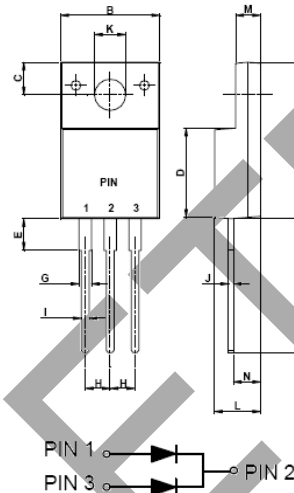
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capability
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

MECHANICAL DATA

- Package: ITO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.06 ounces, 1.70 grams
- Mounting position: Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf-cm)

ITO-220AB



ITO-220AB		
DIM.	MIN.	MAX.
A	15.50	16.50
B	10.00	10.40
C	3.00	3.50
D	9.00	9.30
E	2.90	3.60
F	13.46	14.22
G	1.15	1.70
H	2.40	2.70
I	0.75	1.00
J	0.45	0.70
K	3.00 \varnothing	3.30 \varnothing
L	4.36	4.77
M	2.48	2.80
N	2.50	2.80

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	SBF2030CT	SBF2040CT	SBF2045CT	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	30	40	45	V
Maximum RMS Voltage	V_{RMS}	21	28	31.5	V
Maximum DC Blocking Voltage	V_{DC}	30	40	45	V
Maximum Average Forward Rectified Current(See Fig.1) @TC=80°C	$I_{(AV)}$		20		A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}		225		A
Maximum Forward Voltage at 10A DC (Note 3)	V_F		0.55		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @TJ=25°C @TJ=100°C	I_R		0.4 60		mA
Typical Junction Capacitance per element (Note 4)	C_J		680		pF
Typical thermal resistance _ Junction to Lead (Note 5)	$R_{\theta JC}$		4.0		°C/W
Operating junction temperature range	T_J		-55 to +125		°C
Storage temperature range	T_{STG}		-55 to +150		°C
Dielectric Strength from terminals to case, AC with t=1 minute, RH<30%	V_{dis}		2000		V

Notes:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. 300us Pulse Width, 2% Duty Cycle.
4. Measured at 1.0MHz and applied reverse voltage of 4.0 V DC.
5. Thermal Resistance Junction to Case, device mounted on L150xW150xH1.6mm_copper heat sink.

RATING AND CHARACTERISTIC CURVES
SBF2040CT

FIG.1- FORWARD CURRENT DERATING CURVE

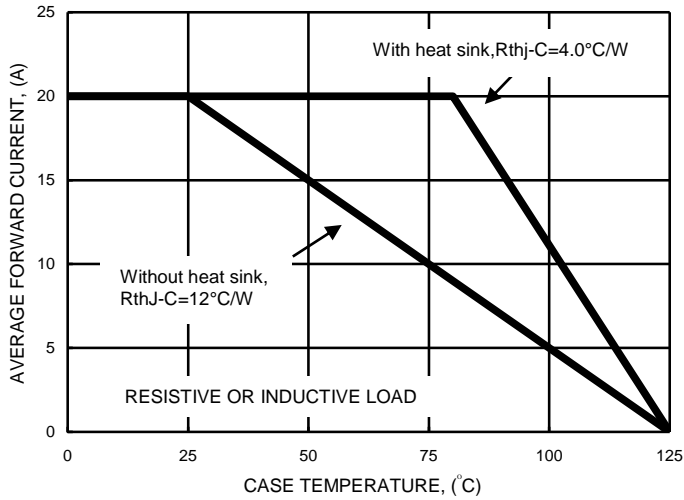


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

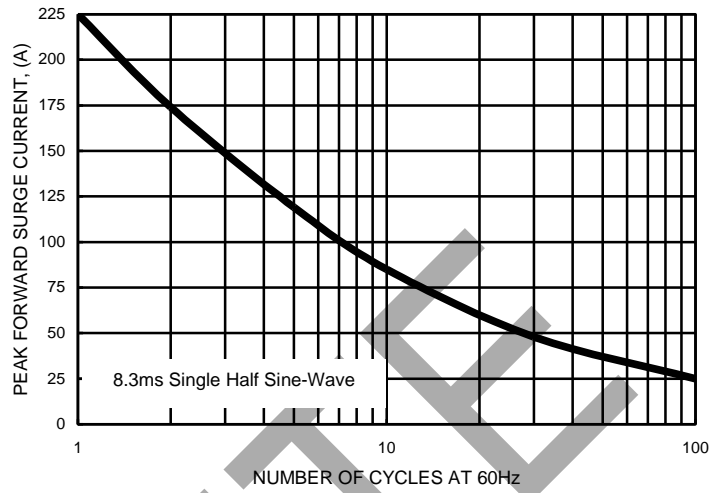


FIG.3- TYPICAL REVERSE CHARACTERISTICS

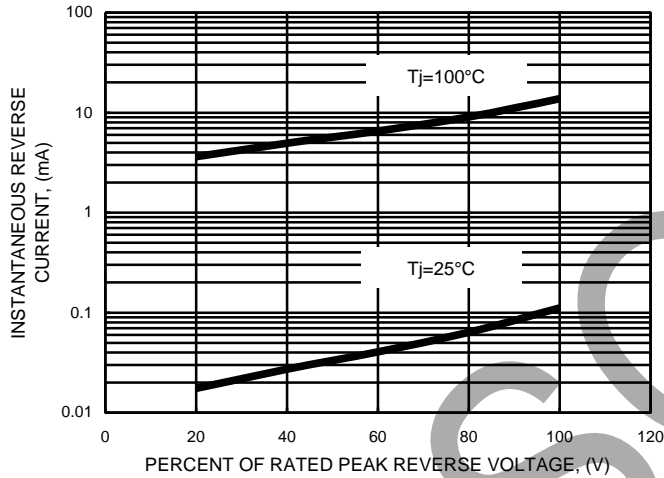


FIG.4- TYPICAL FORWARD CHARACTERISTICS

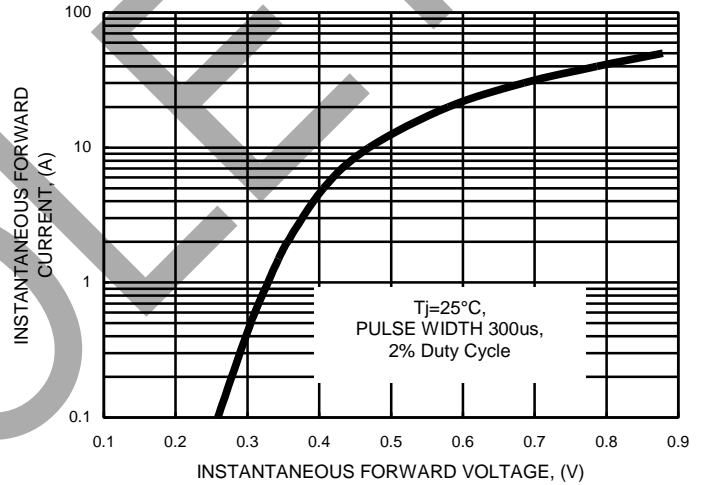


FIG.5- TYPICAL JUNCTION CAPACITANCE

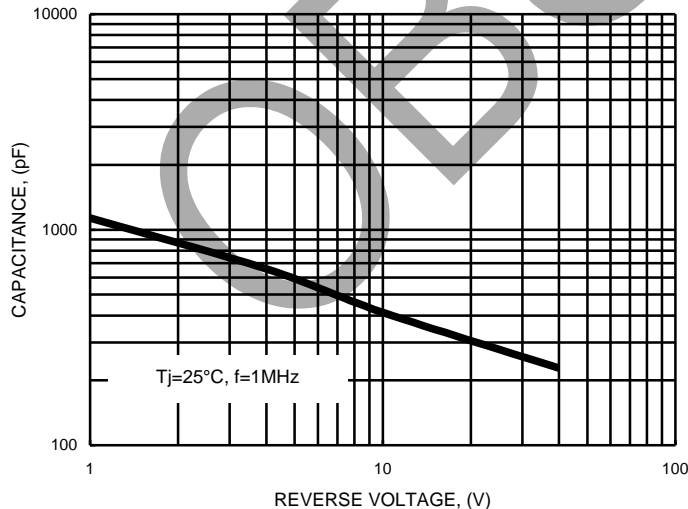
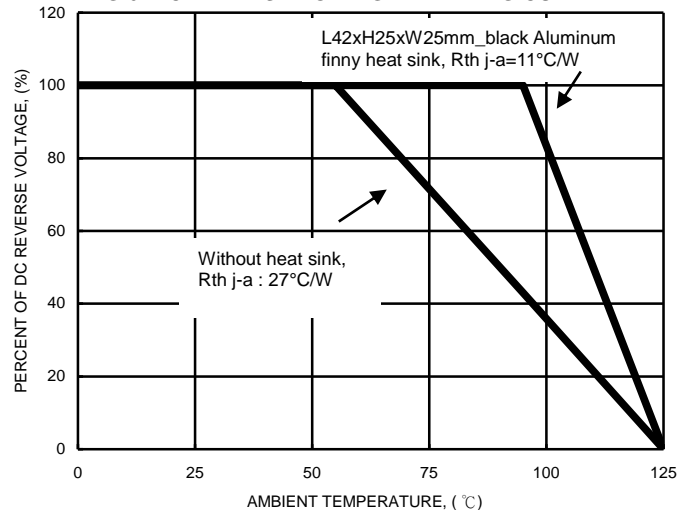


FIG.6- DC REVERSE VOLTAGE DERATING CURVE

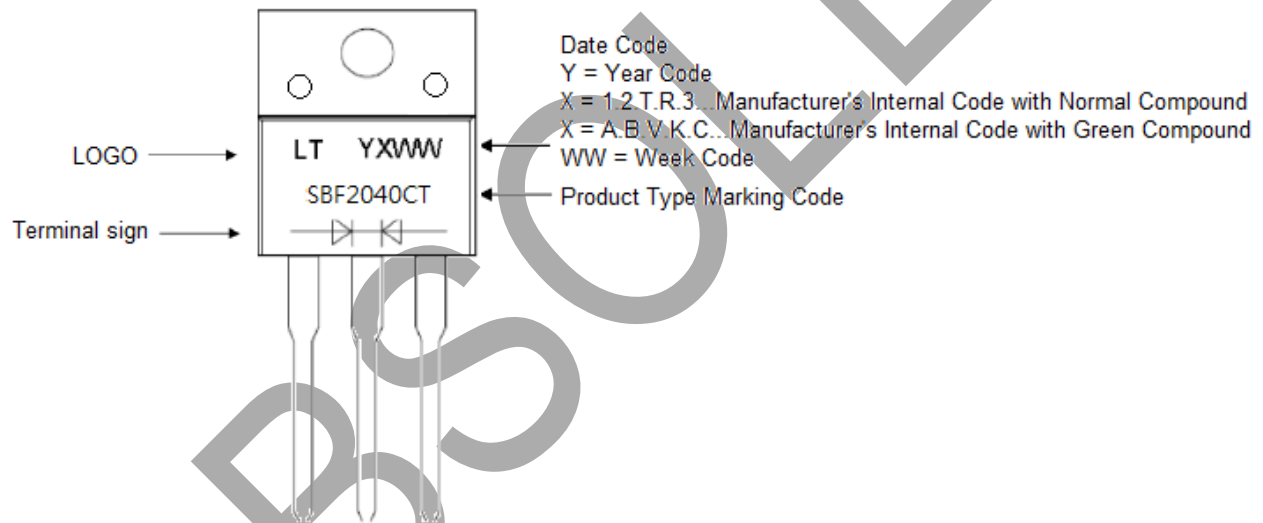


OBSOLETE - PART DISCONTINUED

Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
SBF2040CT	ITO-220AB	50pcs	Tube

Marking Information:



OBSOLETE - PART DISCONTINUED

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