

**Features**

- High Surge Forward Current Capability
- Low Power Loss, High Efficiency
- Trench Mos Schottky Technology
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Resistance Junction to Case : 2.0°C/W

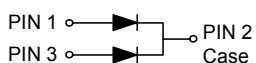
MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
STU40100CT	100V	70V	100V

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Average Forward Current	$I_{F(AV)}$	40A	$T_C = 110^\circ C$
Peak Forward Surge Current	$I_{FSM}$	300A	8.3ms, Half Sine
Current Squared Time	$I^2t$	373A <sup>2</sup> S	1ms ≤ t < 8.3ms Tj=25°C, Rating of per diode
Breakdown Voltage (Note 3)	$V_{BR}$	100V(Min) 105V(Min)	$I_R=1.0mA$ $I_R=10mA$
Forward Voltage Per Diode (Note 2)	$V_F$	0.47V(Typ) 0.54V(Typ) 0.67V(Typ) 0.71V(Max) 0.38V(Typ) 0.45V(Typ) 0.61V(Typ) 0.67V(Max)	$I_F=5A, T_A=25^\circ C$ $I_F=10A, T_A=25^\circ C$ $I_F=20A, T_A=25^\circ C$ $I_F=5A, T_A=125^\circ C$ $I_F=10A, T_A=125^\circ C$ $I_F=20A, T_A=125^\circ C$
Reverse Current Per Diode(Note 3)	$I_R$	9µA(Typ) 200µA(Max) 10mA(Typ) 21mA(Typ) 45mA(Max)	$V_R=70V, T_A=25^\circ C$ $V_R=100V, T_A=25^\circ C$ $V_R=70V, T_A=125^\circ C$ $V_R=100V, T_A=125^\circ C$

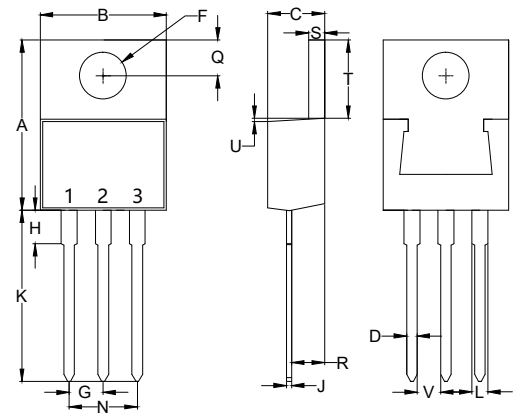
Note :1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.  
2. Pulse test: 300us pulse width, 1%duty cycle  
3. Pulse test: Pulse width≤40ms.

**Internal Structure**



**40 Amp Ultra Low VF Schottky Barrier Rectifier 100 Volts**

**TO-220AB**



**DIMENSIONS**

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
B	0.380	0.429	9.65	10.90	
C	0.140	0.201	3.56	5.10	
D	0.020	0.045	0.51	1.14	
F	0.131	0.170	3.34	4.31	Φ
G	0.079	0.121	2.01	3.07	
H	----	0.250	----	6.35	
J	0.011	0.025	0.28	0.64	
K	0.500	0.580	12.70	14.73	
L	0.045	0.060	1.14	1.52	
N	0.158	0.242	4.02	6.14	
Q	0.087	0.135	2.22	3.43	
R	0.080	0.126	2.04	3.19	
S	0.045	0.055	1.14	1.39	
T	0.230	0.270	5.84	6.86	
U	----	0.050	----	1.27	
V	0.045	----	1.15	----	

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

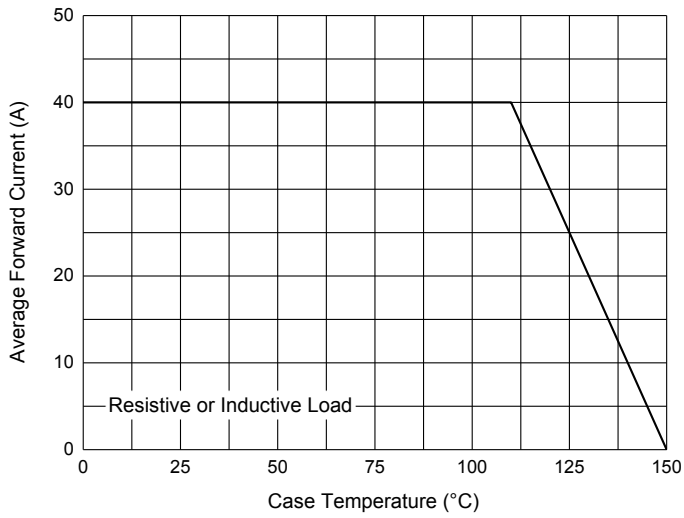


Fig. 2 - Typical Instantaneous Forward Characteristics

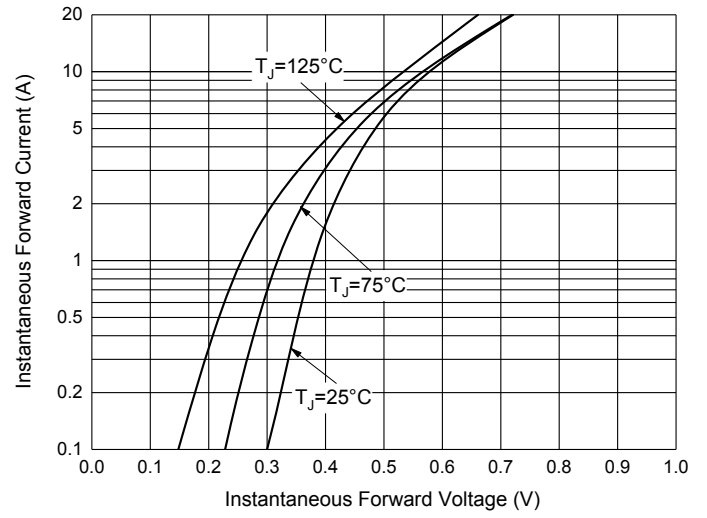
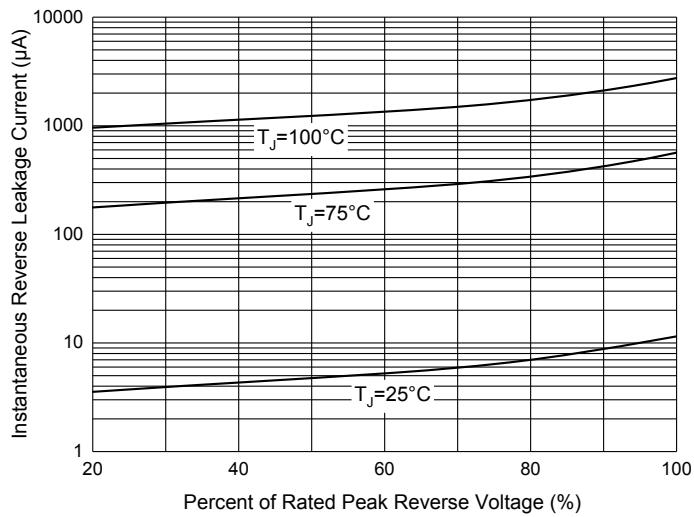


Fig. 3 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
Part Number-BP	Bulk:1Kpcs/Box

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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