



# HSBR20100CT Series to HSBR20150CT Series

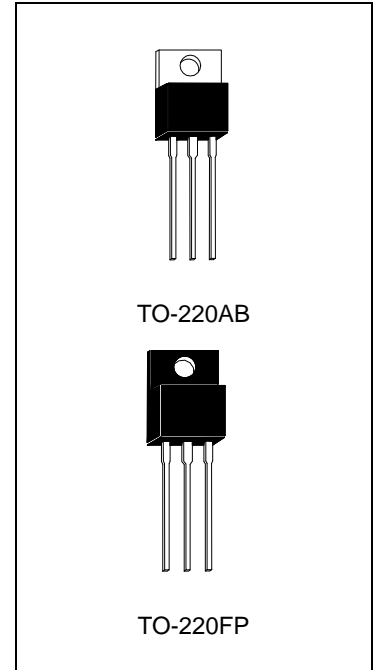
Schottky Barrier Rectifiers  
 (Reverse Voltage 100V to 150V, Forward Current 20A)

## Features

- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- High ESD capability;

## Mechanical Data

- Cases: TO-220 molded plastic body
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-750, Method 2026 guaranteed
- High temperature soldering guaranteed: 250°C/10seconds/.375"(9.5mm) lead lengths at 5lbs.(2.3kg) tension
- Weight: 2.05gram



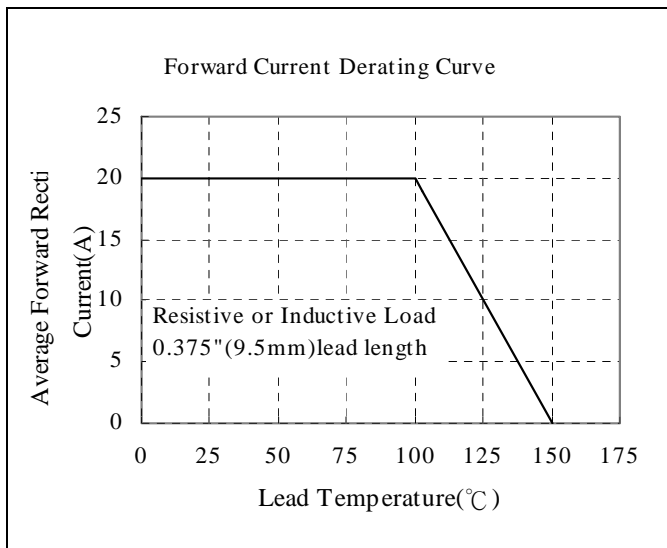
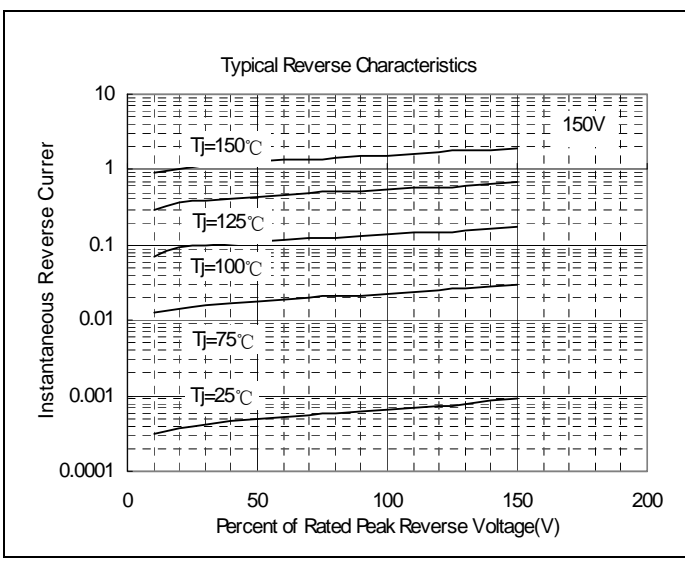
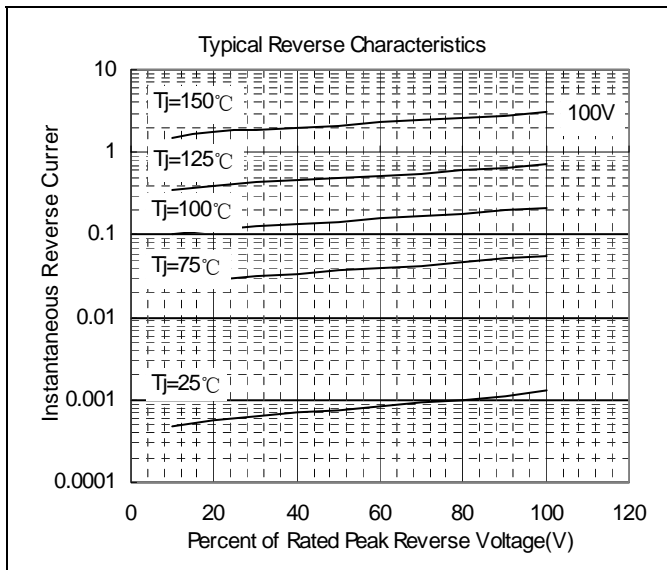
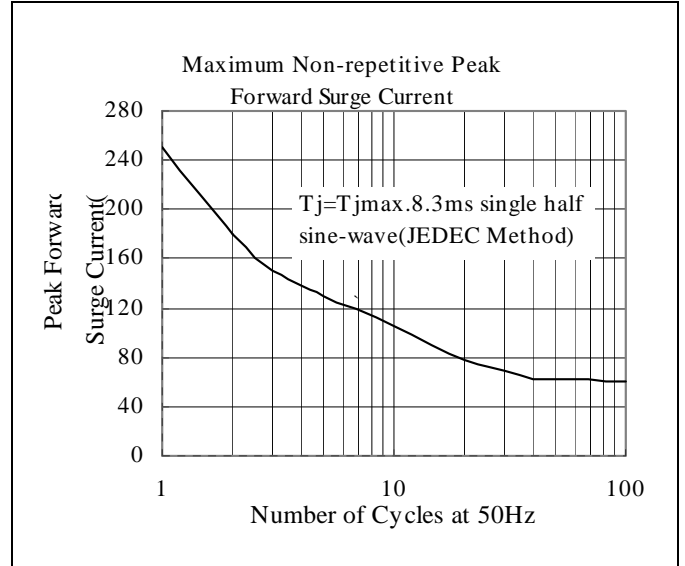
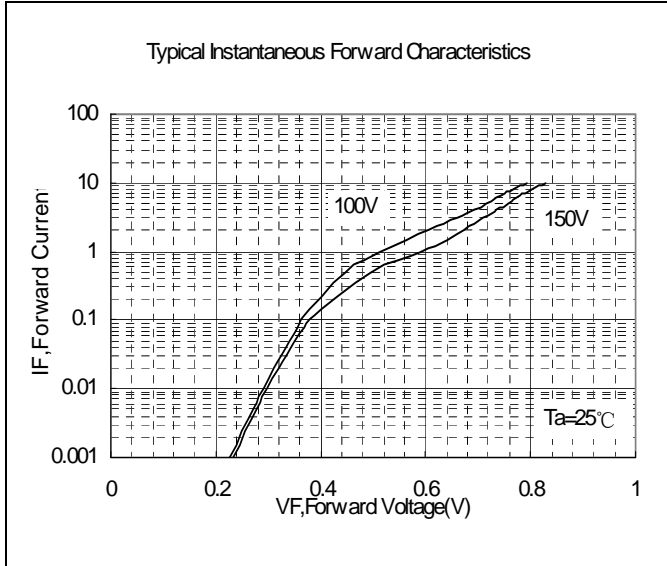
## Maximum Ratings & Electrical Characteristics

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

Ratings	Symbol	HSBR 20100CTE	HSBR 20100CTF	HSBR 20150CTE	HSBR 20150CTF	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100		150		V
Surge Peak Reverse Voltage	$V_{RSM}$	70		105		V
DC Blocking Voltage	$V_{DC}$	100		150		V
Average Forward Rectified Current ( $T_A=75^\circ\text{C}$ )	$I_{FAV}$	20		20		A
Peak Forward Surge Current, 50Hz Half Sine-wave ( $T_A=25^\circ\text{C}$ )	$I_{FSM}$	250		250		A
Repetitive Peak Forward C ( $f>15\text{Hz}$ )	$I_{FRM}$	10		10		A
Instantaneous Forward Voltage@5.0A	$V_F$	0.85		0.90		V
Leakage Current ( $T_J=25^\circ\text{C}$ , $V_R=V_{RRM}$ )	$I_R$	0.2		0.2		mA
Leakage Current ( $T_J=100^\circ\text{C}$ , $V_R=V_{RRM}$ )		20		20		mA
Typical thermal resistance	$R_{\theta JC}$	2.4	3.5	2.4	3.5	°C/W
Operating Junction Temperature Range	$T_J$	-65 to +150				°C
Storage Temperature Range	$T_{STG}$	-65 to +150				°C



### Characteristics Curve





### TO-220AB Dimension

3-Lead TO-220AB  
Plastic Package  
HSMC Package Code: E

**Marking:**

**Note:** Green label is used for pb-free packing  
 Pin Style: 1.Anode 2.Cathode 3.Anode

**Material:**

- Lead solder plating: Sn60/Pb40 (Normal), Sn/3.0Ag/0.5Cu or Pure-Tin (Pb-free)
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

DIM	Min.	Max.
A	5.58	7.49
B	8.38	8.90
C	4.40	4.70
D	1.15	1.39
E	0.35	0.60
F	2.03	2.92
G	9.66	10.28
H	-	*16.25
I	-	*3.83
J	3.00	4.00
K	0.75	0.95
L	2.54	3.42
M	1.14	1.40
N	-	*2.54
O	12.70	14.27
P	14.48	15.87

\*: Typical, Unit: mm

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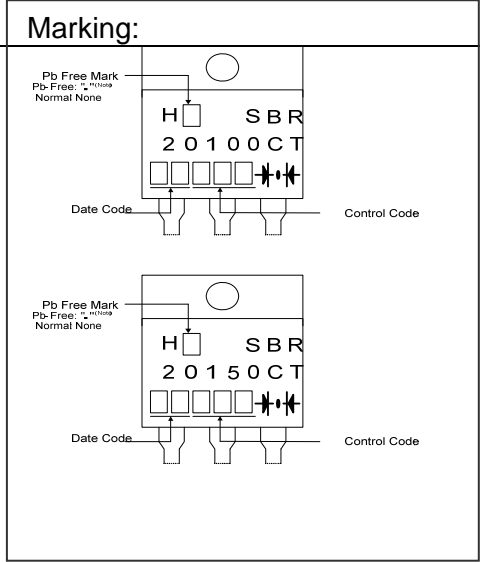
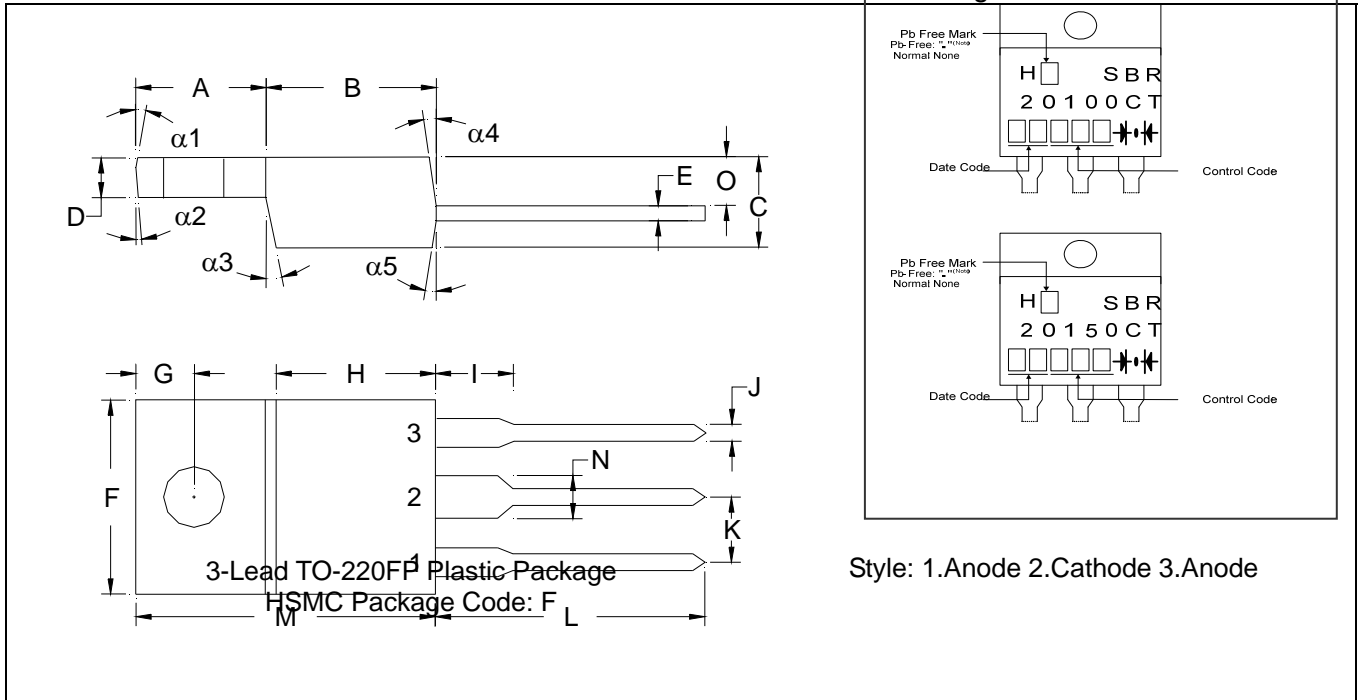
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P	14.48	15.87

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### TO-220FP Dimension



Style: 1.Anode 2.Cathode 3.Anode

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.2480	0.2520	6.30	6.40	K	-	*0.1004	-	*2.55
B	0.3386	0.3425	8.60	8.70	L	0.5118	0.5906	13.00	15.00
C	0.1673	0.1870	4.25	4.75	M	0.5886	0.5925	14.95	15.05
D	0.1043	0.1083	2.65	2.75	N	-	*0.0669	-	*1.70
E	0.0230	0.0242	0.58	0.61	O	0.1098	0.1114	2.79	2.83
F	0.3980	0.4039	10.11	10.26	$\alpha 1$	-	-2°	-	*2°
G	0.1083	0.1122	2.75	2.85	$\alpha 2$	-	*5°	-	*5°
H	0.3386	0.3425	8.60	8.70	$\alpha 3$	-	*15°	-	*15°
I	-	*0.1496	-	*3.80	$\alpha 4$	-	*5°	-	*5°
J	-	*0.0236	-	*0.60	$\alpha 5$	-	*5°	-	*5°

- Notes: 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.  
 2.Controlling dimension: millimeters.  
 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

**Material:**

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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# HI-SINCERITY

## MICROELECTRONICS CORP.

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