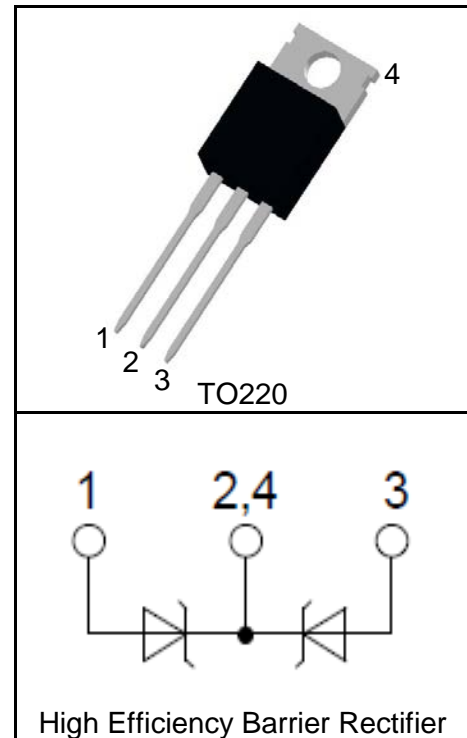


**Features**

- $V_{RRM} = 100V$   
 $I_{F(AV)} = 2 \times 10A$
- HEBR<sup>®</sup> Technology
- Ultra-Low Forward Voltage Drop
- Low Power Loss and High Efficiency
- High Surge Capability
- Low Leakage Current
- Lead Free and Green Devices Available

**Applications**

- Rectifiers in SMPS
- Free Wheeling Diode
- DC-DC Converters

**Pin Description**

**Absolute Maximum Ratings**

Symbol	Parameter	Rating	Unit	
<b>Common Ratings</b> ( $T_C = 25^\circ C$ Unless Otherwise Noted)				
$V_{RRM}^{①}$	Maximum Repetitive Reverse Voltage	100	V	
$V_R^{①}$	Maximum DC Reverse Voltage	100	V	
$V_{R(RMS)}^{①}$	RMS Reverse Voltage	70	V	
$I_{F(AV)}$	Average Rectified Forward Current, $T_C = 130^\circ C$	per Device	20	A
		per Diode	10	A
$I_{FSM}$	Peak Forward Surge Current, 8.3ms Half Sine Wave	250	A	
$T_{STG}$	Storage Temperature Range	-55 to 150	$^\circ C$	
$T_J$	Operating Junction Temperature Range	150	$^\circ C$	
<b>Mounted on Large Heat Sink</b>				
$R_{\theta JC}$	Thermal Resistance-Junction to Case	1	$^\circ C/W$	
$R_{\theta JA}$	Thermal Resistance-Junction to Ambient	62.5	$^\circ C/W$	

**Electrical Characteristics** ( $T_C=25^\circ\text{C}$  Unless Otherwise Noted)

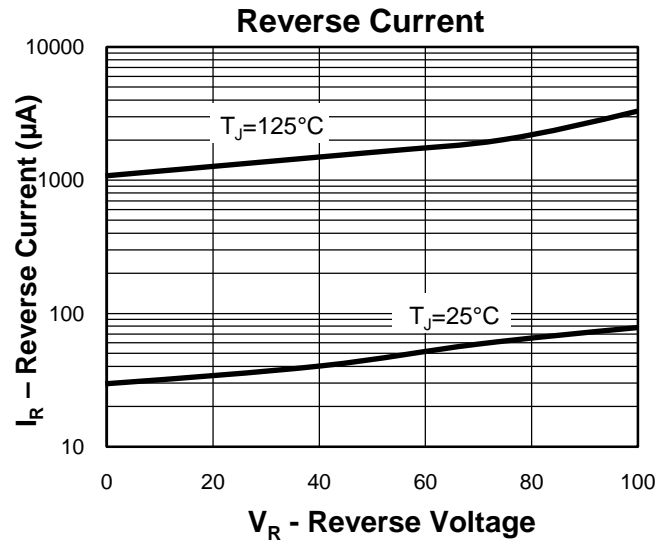
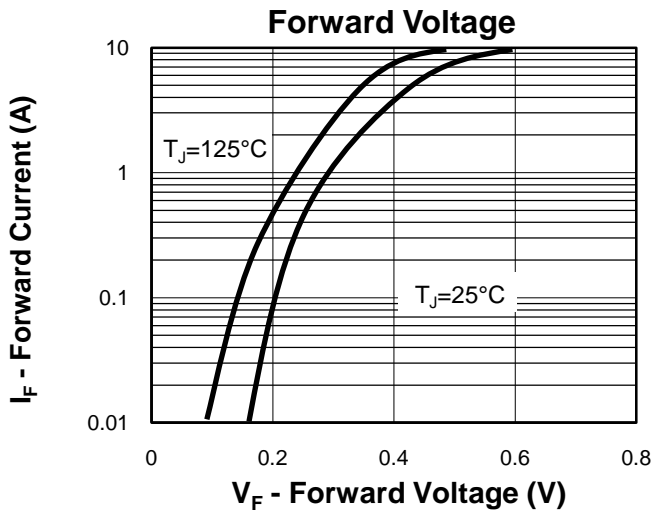
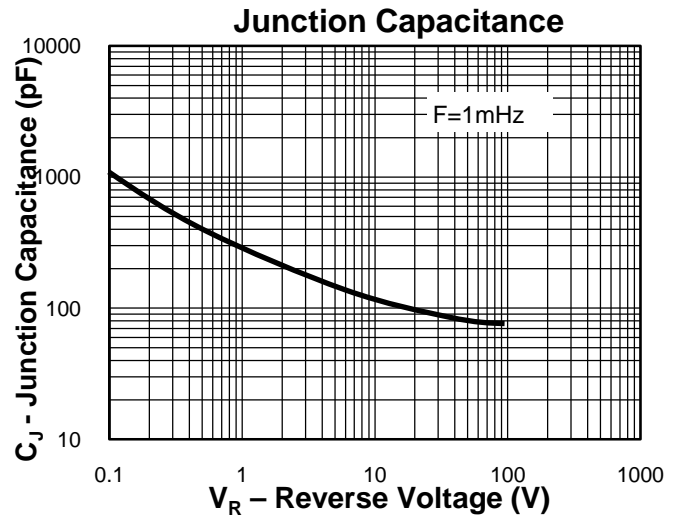
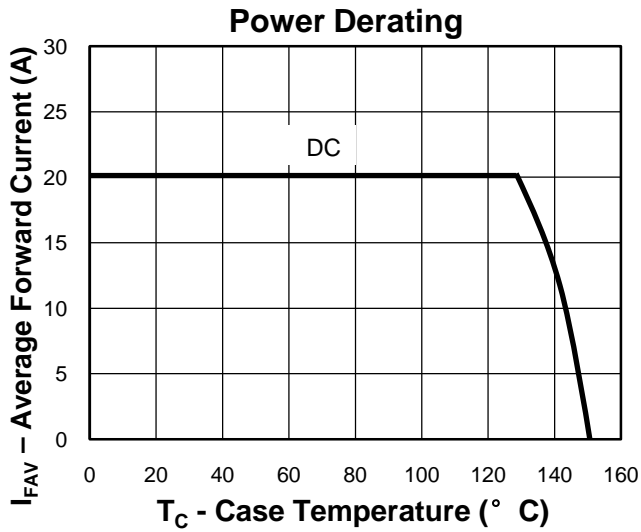
Symbol	Parameter	Test Condition	RUS1H10R			Unit
			Min.	Typ.	Max.	
<b>Static Characteristics</b>						
$V_{(BR)R}^{②}$	Reverse Breakdown Voltage	$I_R=300\mu\text{A}$	100			V
$I_R^{②}$	Reverse Leakage Current	$V_R=100\text{V}, T_C=25^\circ\text{C}$			300	$\mu\text{A}$
		$V_R=100\text{V}, T_C=125^\circ\text{C}$			5	mA
$V_F^{②}$	Forward Voltage Drop	$I_F=5\text{A}, T_C=25^\circ\text{C}$		0.45	0.55	V
		$I_F=5\text{A}, T_C=125^\circ\text{C}$		0.38	0.47	V
		$I_F=10\text{A}, T_C=25^\circ\text{C}$		0.59	0.70	V
		$I_F=10\text{A}, T_C=125^\circ\text{C}$		0.49	0.60	V

- Notes: ① For  $T_C > 25^\circ\text{C}$  the derating of  $V_R$  and  $I_F$  has to be considered.  
 ② Pulse test, pulse width  $\leq 300\mu\text{s}$ , duty cycle  $\leq 2\%$ .

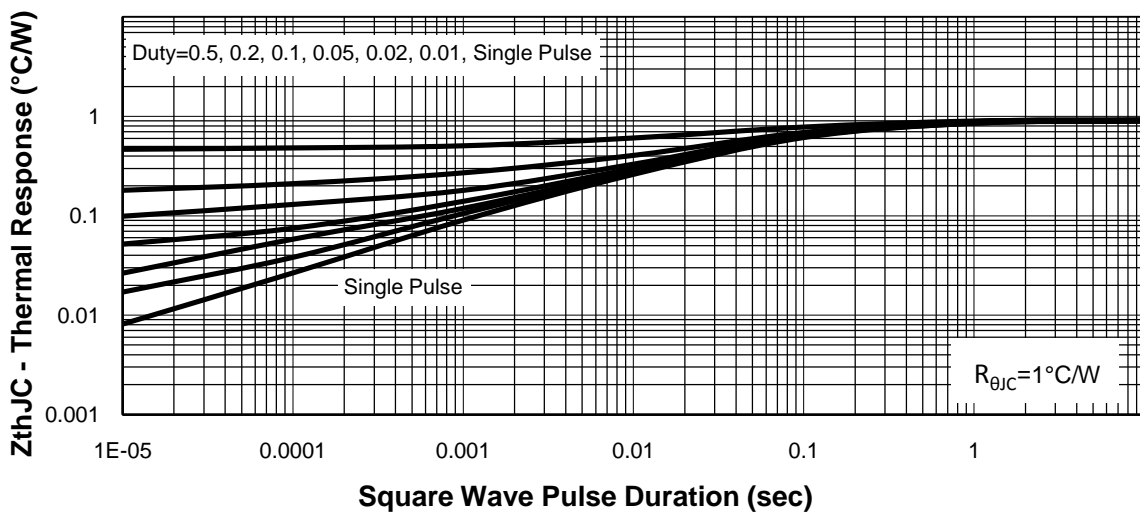
**Ordering and Marking Information**

<b>Device</b>	<b>Marking</b>	<b>Package</b>	<b>Packaging</b>	<b>Quantity</b>	<b>Reel Size</b>	<b>Tape width</b>
RUS1H10R	RUS1H10R	TO220	Tube	50	-	-

**Typical Characteristics**

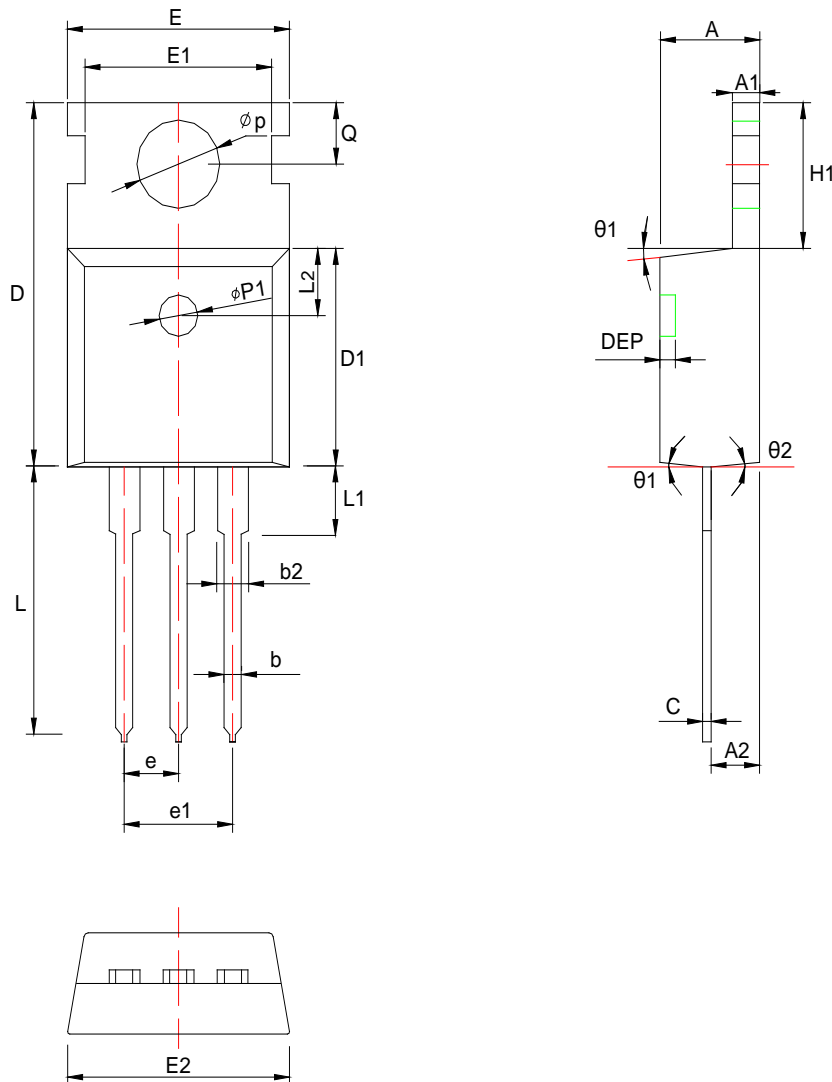


**Thermal Transient Impedance**



**Package Information**

**TO220**



SYMBOL	MM			INCH			SYMBOL	MM			INCH		
	MIN	NOM	MAX	MIN	NOM	MAX		MIN	NOM	MAX	MIN	NOM	MAX
A	4.40	4.55	4.70	0.173	0.179	0.185	$\Phi p1$	1.40	1.50	1.60	0.055	0.059	0.063
A1	1.20	1.30	1.40	0.047	0.051	0.055	e	2.54 BSC			0.10 BSC		
A2	2.23	2.38	2.53	0.088	0.094	0.100	e1	5.08 BSC			0.20 BSC		
b	0.75	0.80	0.85	0.030	0.031	0.033	H1	6.40	6.50	6.60	0.252	0.256	0.260
b2	1.17	1.28	1.39	0.046	0.050	0.055	L	12.70	13.18	13.65	0.500	0.519	0.537
c	0.40	0.50	0.60	0.016	0.020	0.024	L1	*	*	3.95	*	*	0.156
D	15.40	15.60	15.80	0.606	0.614	0.622	L2	2.50 REF			0.098 REF		
D1	8.96	9.21	9.46	0.353	0.363	0.372	$\Phi p$	3.50	3.60	3.70	0.138	0.142	0.146
DEP	0.05	0.13	0.20	0.002	0.005	0.008	Q	2.73	2.80	2.87	0.107	0.110	0.113
E	9.66	9.97	10.28	0.380	0.393	0.405	$\theta 1$	5°	7°	9°	5°	7°	9°
E1	*	8.70	*	*	0.343	*	$\theta 2$	1°	3°	5°	1°	3°	5°
E2	9.80	10.00	10.20	0.386	0.394	0.402							

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