

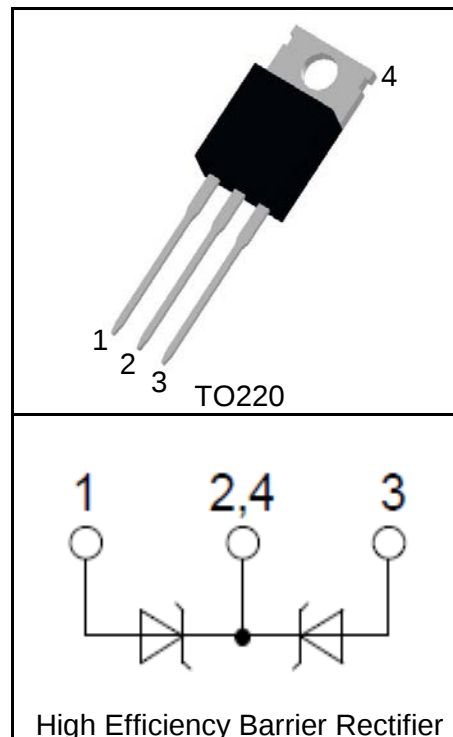
Features

- $V_{RRM} = 100V$
 $I_{F(AV)} = 2 \times 10A$
- HEBR® 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
Common Ratings ($T_C = 25^\circ C$ 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
		per Diode	10
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	$^\circ C$
Mounted on Large Heat Sink			
$R_{\theta JC}$	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)

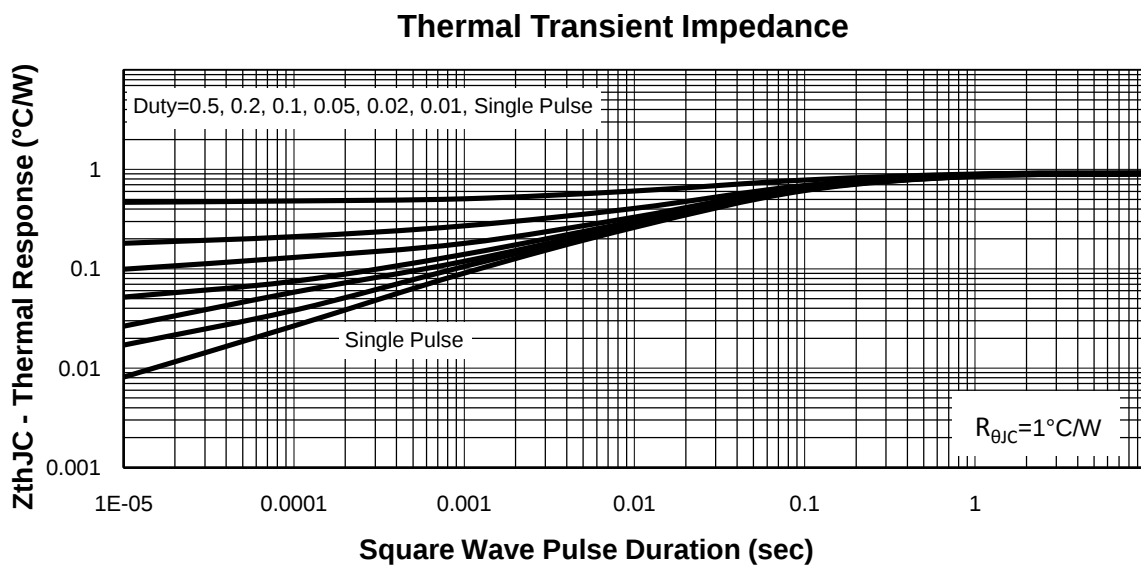
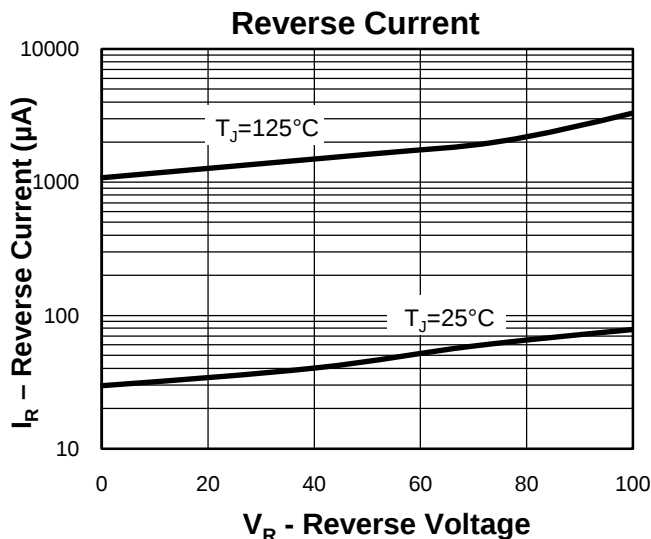
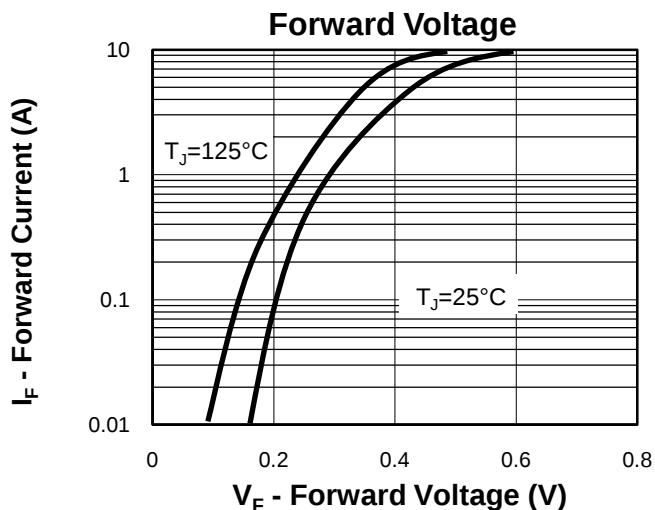
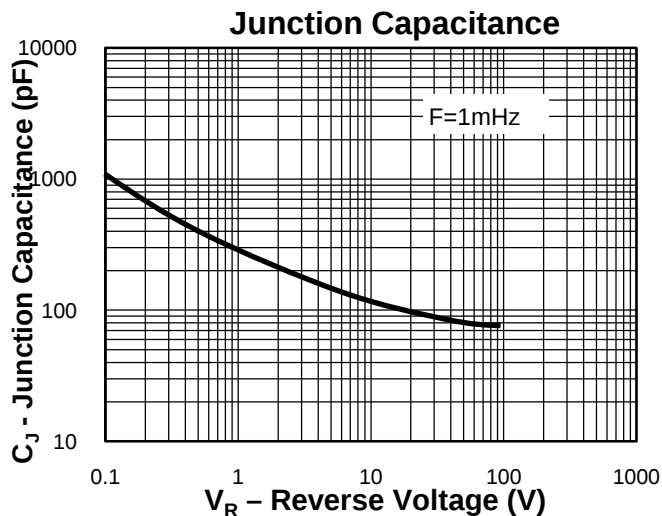
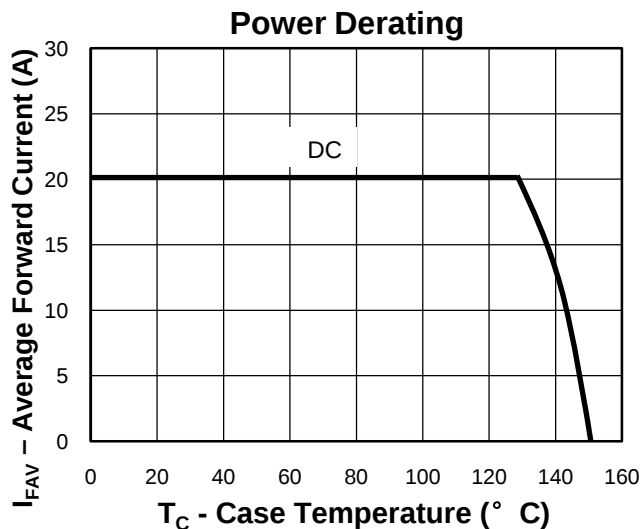
Symbol	Parameter	Test Condition	RUS1H10R			Unit
			Min.	Typ.	Max.	
Static Characteristics						
$V_{(BR)R}^{②}$	Reverse Breakdown Voltage	$I_R=300\mu A$	100			V
$I_R^{②}$	Reverse Leakage Current	$V_R=100V, T_C=25^{\circ}C$			300	μA
		$V_R=100V, T_C=125^{\circ}C$			5	mA
$V_F^{②}$	Forward Voltage Drop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

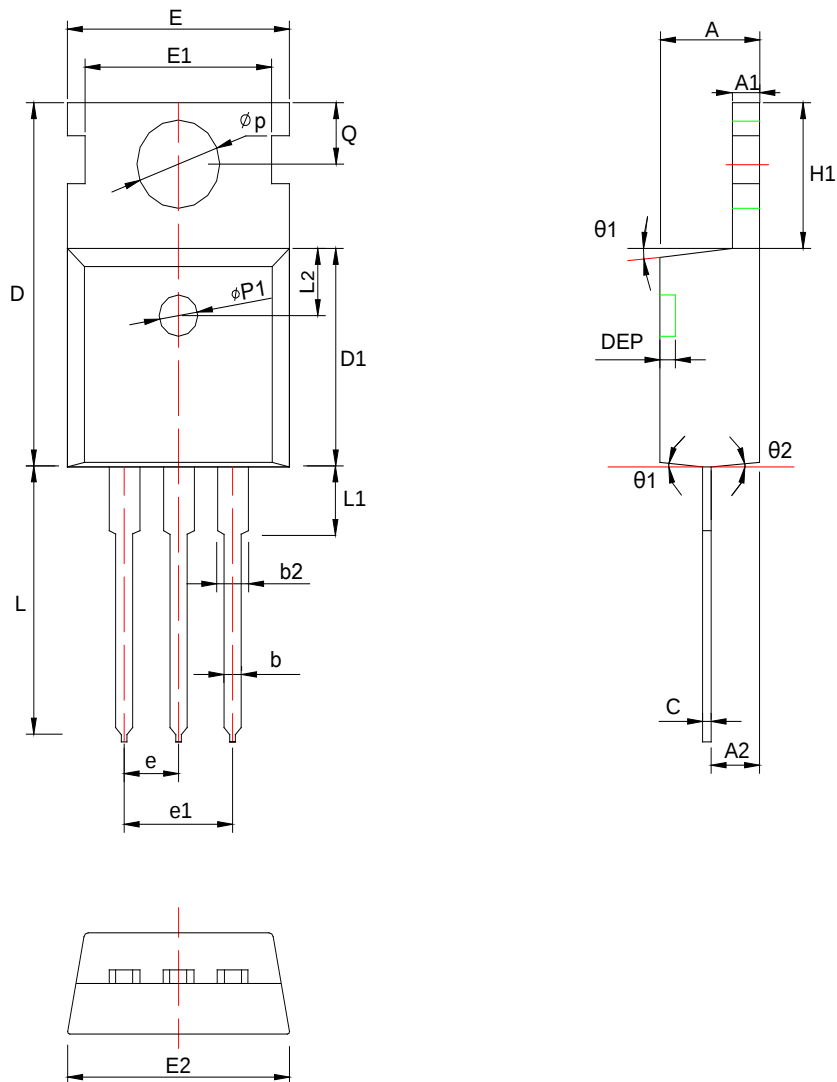
Device	Marking	Package	Packaging	Quantity	Reel Size	Tape width
RUS1H10R	RUS1H10R	TO220	Tube	50	-	-

Typical Characteristics



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	Φp	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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