
/ Descriptions

TO-220F N 650V

N-CHANNEL 650V Super-Junction Power MOSFET in a TO-220F Plastic Package.

/ Features

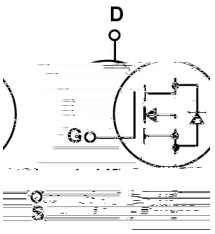
$R_{DS(on)}$×Qg 100% ROHS

Very low $R_{DS(on)}$×Qg,100%avalanche tested,RoHS compliant.

/ Applications

For switch mode power supply, uninterruptible power supply, power factor correction.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 D PIN 3 S

/ Marking

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	650	V
Drain Current	I_D(Tc=25℃)	14	A
Drain Current - Pulsed	I_{DM}	56	A
Gate-Source Voltage	V_{GS}	±30	V
Single Pulsed Avalanche Energy	E_{AS}	433	mJ
Avalanche Current	I_{AS}	10	A
Power Dissipation	P_D(Tc=25℃)	30	W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to 150	
Junction-to-Case	$R_{\theta JC}$	4.2	/W
Junction-to-Ambient	$R_{\theta JA}$	65	/W

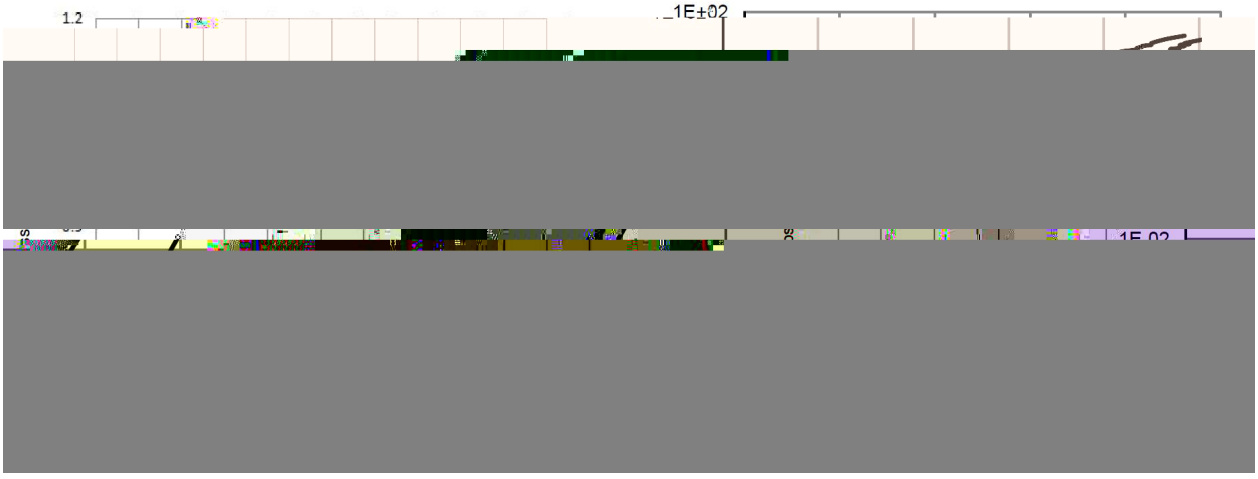
Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	650	700		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=650V T_J=25℃	V_{GS}=0V			1.0	μA
Gate-Body Leakage Current, Forward	I_{GSS}	V_{GS}=±30V				±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	2.5	3.3	4.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=5.5A		235	280	mΩ

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Continuous						

/ Electrical Characteristic Curve

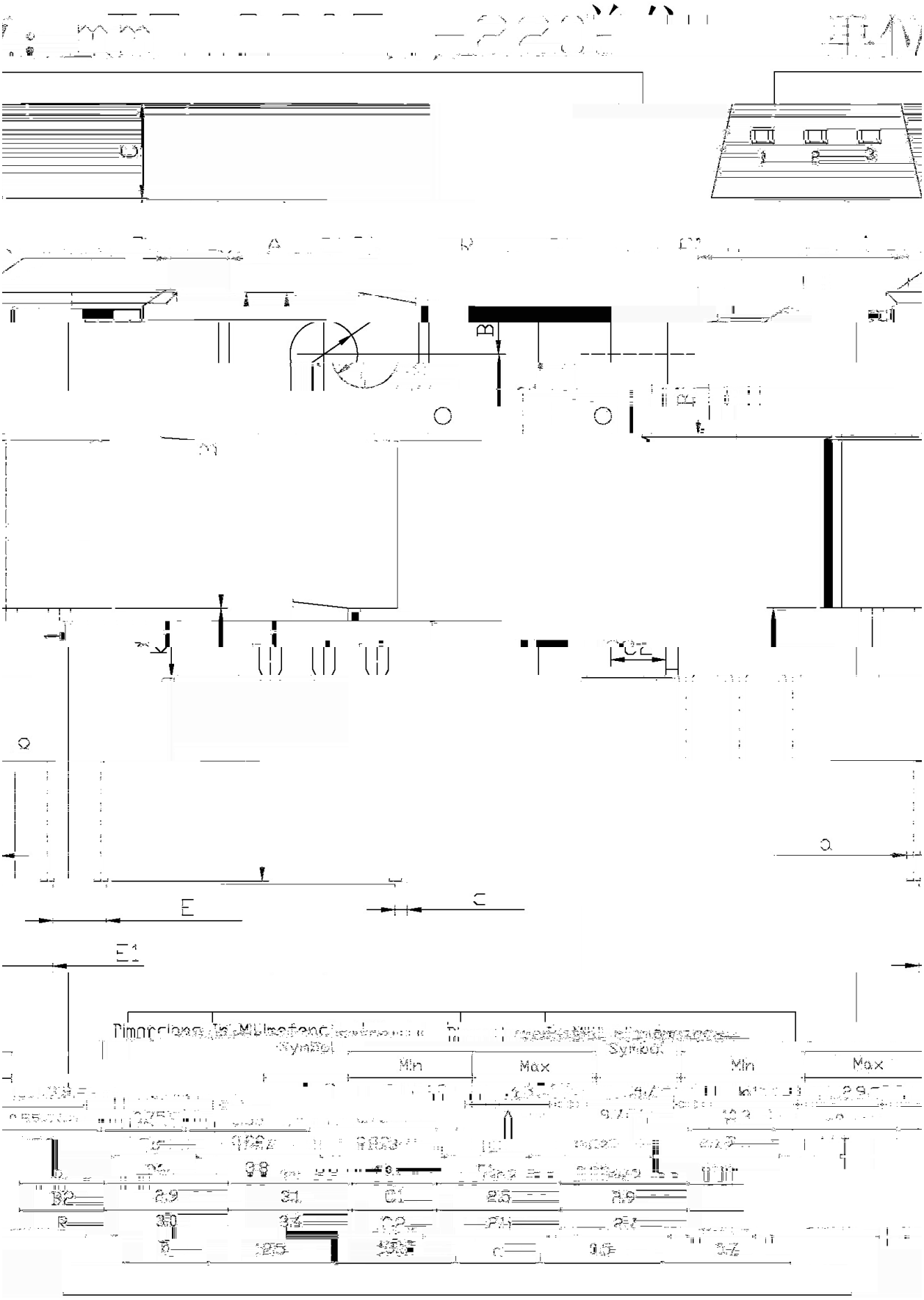






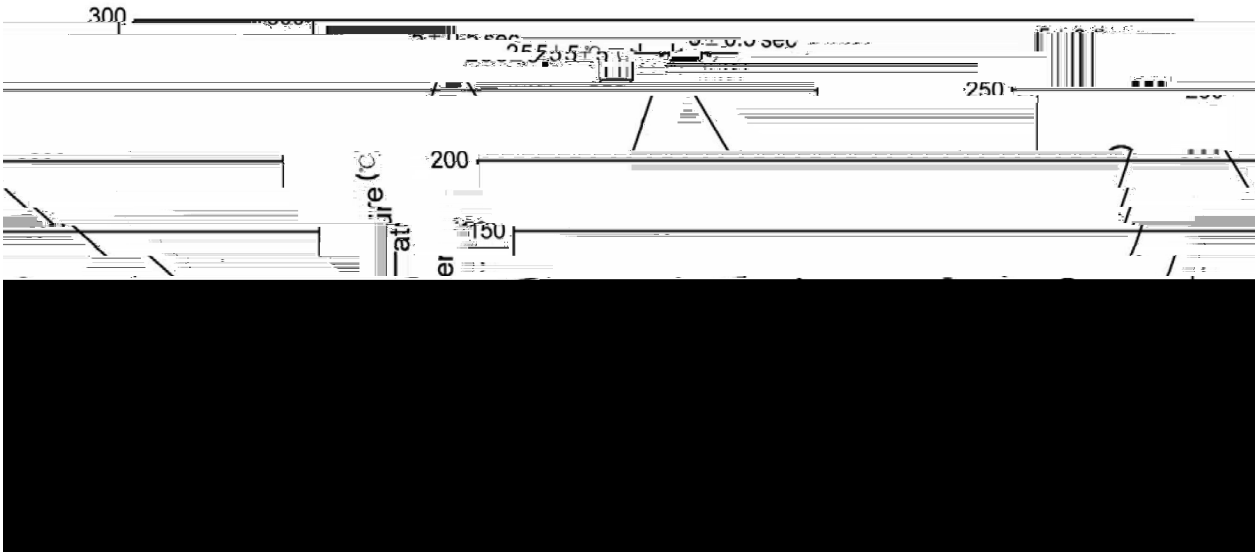
BRF65R280C
Rev.B May.-

/ Package Dimensions



R

( ) / Temperature Profile for Dip Soldering(Pb-Free)



				Note:
1	25 150	60	90sec;	1.Preheating:25~150℃, Time:60~90sec.
2	255±5		5±0.5sec;	2.Peak Temp.:255±5℃, Duration:5±0.5sec.
3		2	10℃/sec.	3. Cooling Speed: 2~10℃/sec.

/ Resistance to Soldering Heat Test Conditions

270±5℃	10±1 sec.	Temp.:270±5	Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量	Dimension 包装尺寸 (unit: mm^3)	±