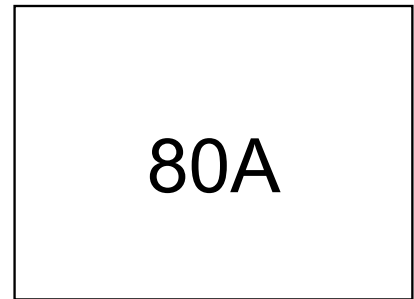


85HFR160 series stud type diode

Features

- Wide current range
- High surge current capabilities
- Stud cathode and stud anode version

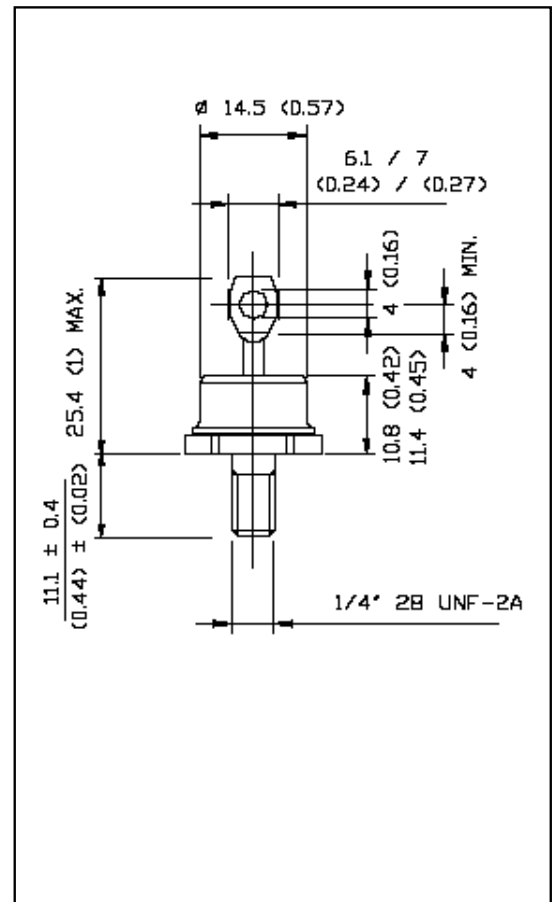


Typical Applications

- Converters
- Power supplies
- Machine tool controls

Major Ratings and Characteristics

Parameters		85HF160	Units
$I_{F(AV)}$		80	A
	@ T_{hs}	125	°C
$I_{F(RMS)}$		240	A
I_{FSM}	@ 50Hz	300	A
	@ 60Hz	320	A
$I^2 t$	@ 50Hz	450	A ² s
	@ 60Hz	430	A ² s
V_{RRM}	range	800	V
T_J	range	- 40 to 180	°C



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ELECTRICAL SPECIFICATIONS

Voltage Ratings

85HF160	Voltage Code	V_{RRM} , maximum repetitive peak reverse voltage V	V_{RSM} , maximum non-repetitive peak rev. voltage V	I_{RRM} max. @ $T_J = T_{J \text{ max.}}$ mA
	16	1600	1700	9

Forward Conduction

Parameter	85HF	Units	Conditions
$I_{F(AV)}$ Max. average forward current @ Heatsink temperature	80	A	180° conduction, half sine wave
	125	°C	Double side (single side) cooled
$I_{F(RMS)}$ Max.RMS forward current	80	A	
I_{FSM} Max. peak, one-cycle forward, non-repetitive surge current	370	A	t = 10ms $T_{VJ}=45^{\circ}C$
	400		t = 8.3ms $V_R=0$
	300		t = 10ms $T_{VJ}=T_{VJM}$
	320		t = 8.3ms $V_R=0$
$I^2 t$ Maximum $I^2 t$ for fusing	680	$A^2 s$	t = 10ms $T_{VJ}=45^{\circ}C$
	660		t = 8.3ms $V_R=0$
	450		t = 10ms $T_{VJ}=T_{VJM}$
	430		t = 8.3ms $V_R=0$
V_F	≤ 1.36	V	$I_F= 55A, T_{VJ} = 25^{\circ}C,$
$V_{F(TO)}$	0.85	V	For power-loss calculations only
r_T	8	MΩ	$T_{VJ}=T_{VJM}$

Thermal and Mechanical Specification

Parameter	85HF160	Units	Conditions
T_J Max.junction operating temperature range	-40 to 180	°C	
T_{stg} Max. storage temperature range	-55 to 200		
R_{thJC} Max,thermal resistance,junction to case	1.5	K/W	DC operation
R_{thCS} Max. thermal resistance,Case to heatsink	2.1		DC operation single(double) side cooled
wt Approximate weight		g	

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