Advance Information

SWITCHMODE™ Power Rectifier

MUR3080

Motorola Preferred Device

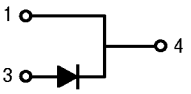
. . . designed for use in switching power supplies, inverters and as free wheeling diodes, these state–of–the–art devices have the following features:

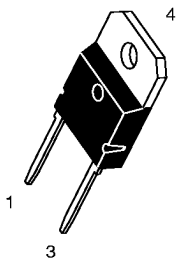
- Ultrafast 75 ns (Typ) Soft Recovery Time
- 175°C Operating Junction Temperature
- High Voltage Capability to 800 Volts
- Low Forward Voltage Drop
- High Temperature Glass Passivated Junction

ULTRAFAST RECTIFIERS
30 AMPERES
600–800 VOLTS

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 4.3 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Shipped 30 Units Per Plastic Tube
- Marking: U3080





CASE 340E–02, STYLE 1

MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	800	Volts
Average Rectified Forward Current (Rated V_R) T_C = 70°C	$I_{F(AV)}$	30	Amps
Peak Repetitive Forward Current (Rated V_R, Square Wave, 20 kHz) T_C = 150°C	I_{FRM}	30	Amps
Non Repetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}	300	Amps
Operating Junction Temperature	T_J	–65 to +175	°C
Storage Temperature	T_{stg}	–65 to +175	°C

THERMAL CHARACTERISTICS

Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.0	°C/W

ELECTRICAL CHARACTERISTICS (TYPICAL DATA)

Instantaneous Forward Voltage (1) @ I_F = 30 Amps, T_C = 25°C @ I_F = 30 Amps, T_C = 100°C	V_F	 1.9 1.8	Volts
Instantaneous Reverse Current (1) @ Rated DC Voltage, T_C = 25°C @ Rated DC Voltage, T_C = 100°C	I_R	 100 5.0	 μA mA
Reverse Recovery Time I_F = 1.0 Amp, V_R = 30 V, dI/dt = 50 A/μs	t_{RR}	110	ns

(1) Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

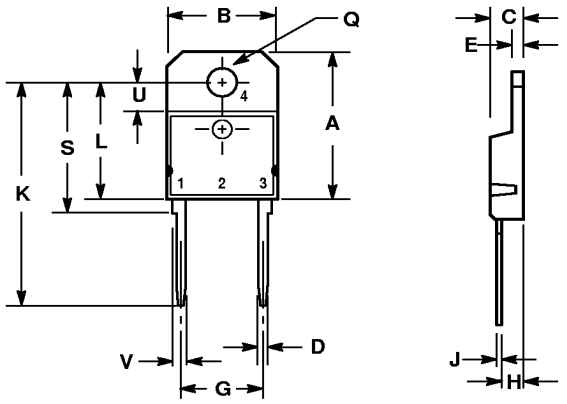
SWITCHMODE is a trademark of Motorola Inc.

This document contains information on a new product. Specifications and information herein are subject to change without notice.
Preferred devices are Motorola recommended choices for future use and best overall value.

Rev 2

MOTOROLA

PACKAGE DIMENSIONS



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982
2. CONTROLLING DIMENSION: MILLIMETER.

	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
A	—	20.35	—	0.801
B	14.70	15.20	0.579	0.598
C	4.70	4.90	0.185	0.193
D	1.10	1.30	0.043	0.051
E	1.17	1.37	0.046	0.054
G	10.80	11.10	0.425	0.437
H	2.00	3.00	0.079	0.118
J	0.50	0.78	0.020	0.031
K	31.00 REF		1.220 REF	
L	—	16.20	—	0.638
Q	4.00	4.10	0.158	0.161
S	17.80	18.20	0.701	0.717
U	4.00 REF		0.157 REF	
V	1.75 REF		0.069	

STYLE 1:
PIN 1. CATHODE
3. ANODE
4. CATHODE

CASE 340E–02
ISSUE A

How to reach us:
USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;
P.O. Box 5405, Denver, Colorado 80217. 1–303–675–2140 or 1–800–441–2447

JAPAN: Nippon Motorola Ltd.: SPD, Strategic Planning Office, 4–32–1,
Nishi–Gotanda, Shinagawa–ku, Tokyo 141, Japan. 81–3–5487–8488

Customer Focus Center: 1–800–521–6274

Mfax™: RMFAX0@email.sps.mot.com – TOUCHTONE 1–602–244–6609
Motorola Fax Back System – US & Canada ONLY 1–800–774–1848
– http://sps.motorola.com/mfax/

ASIA/PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,
51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852–26629298

HOME PAGE: http://motorola.com/sps/