■ Applications

Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications

• AC-DC Adaptors

• DC-DC Converters

■ Product Summary

V_{RRM}	45	V
I_F@Tc=25℃	20	A
$V_{F,TYP}$@10A,Tc=25℃	0.44	V
$V_{F,TYP}$@10A,Tc=125℃	0.39	V
$I_{R,MAX}$@Tc=25℃	0.3	mA

■ Features

• Schottky Barrier Chip

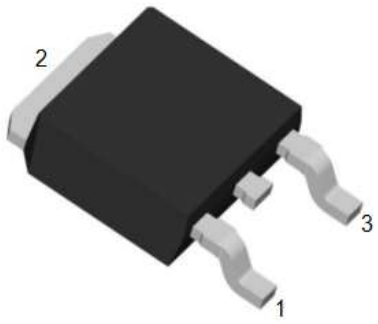
• Guard Ring Die Construction for Transient Protection

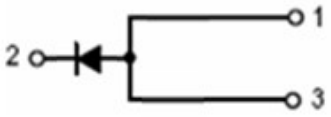
• Low Power Loss,High Effciency

• High Surge Capability

• High Current Capability and Low Forward Voltage Drop

• Halogen Free and RoHS Compliant





1、ANODE

2、CATHODE

3、ANODE

TO-252

Marking	Package	Packaging	Min. package quantity
MK20T45CT	TO-252	Tape & Reel	3000

■ Absolute Maximum Ratings（Tc=25℃ unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	45	V
Surge Peak Reverse Voltage	V_{RSM}		V
DC Peak Blocking Voltage	V_R		V
Continuous Forward Current	$I_{F(per\ leg)}$	10	A
	$I_{F(total)}$	20	A
Non-Repetitive Peak Surge Current((Surge applied at rated load conditions halfwave,single phase,60HZ)	I_{FSM}	275	A
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55-150	℃

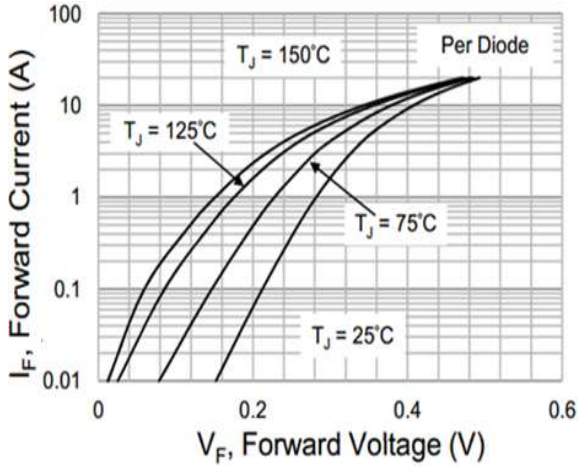
■ Thermal Characteristics

Parameter	Symbol	Package	Max	Unit
Maximum Junction-to-Case	$R_{\theta JC}$	TO-252	3	℃/W
Maximum Junction-to-Ambient	$R_{\theta JA}$	TO-252	60	℃/W

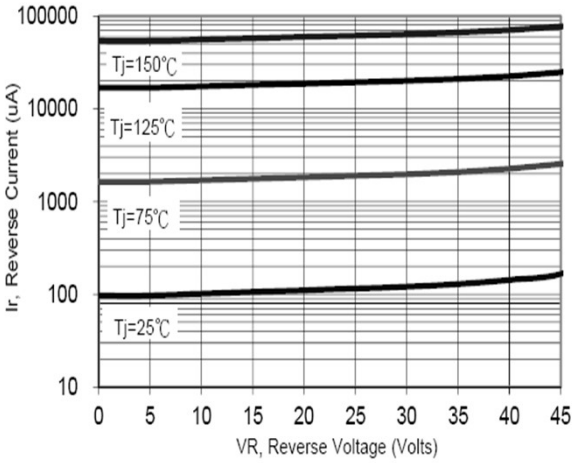
■ Electrical Characteristics（Per Leg）（Tc=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F=5A，T_J=25℃	-	0.37		V
		I_F=5A，T_J=125℃	-	0.32		V
		I_F=10A，T_J=25℃	-	0.44		V
		I_F=10A，T_J=125℃	-	0.39		V
Reverse Current	I_R	V_R=45V，T_J=25℃	-	0.08	0.3	mA
		V_R=45V，T_J=125℃	-	-	100	mA

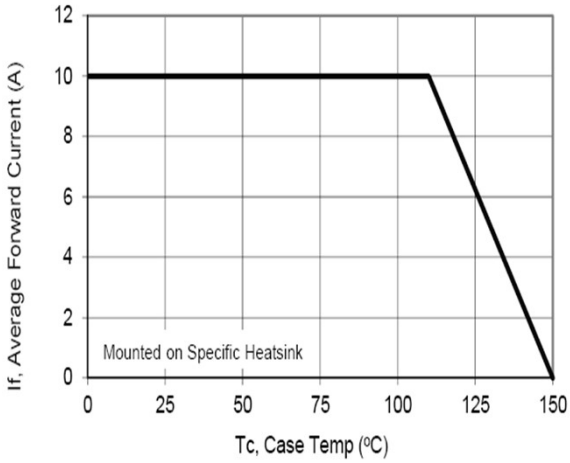
■ Characteristics Curves



Forward Characteristics Per Diode

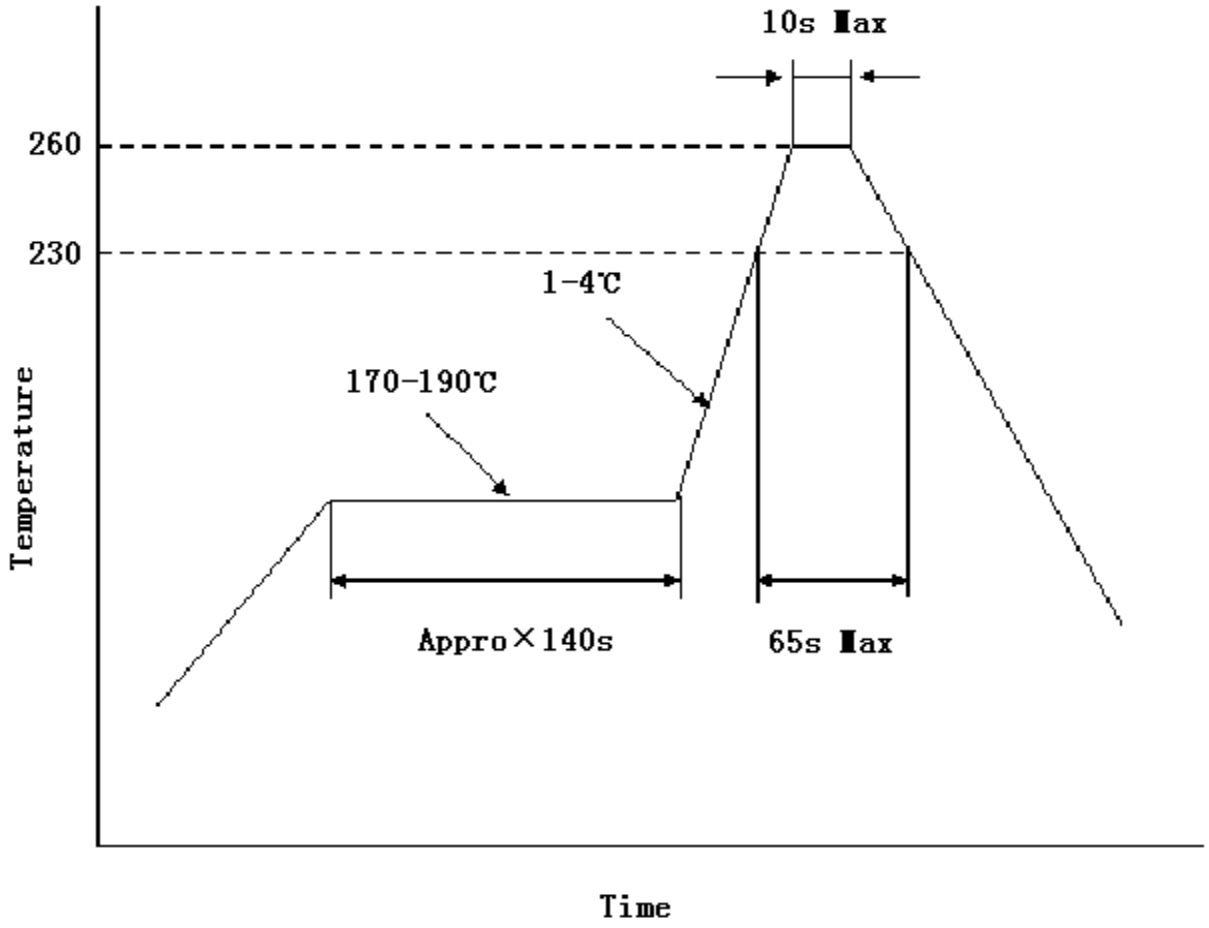


Reverse Characteristics Per Diode



Current Derating Per Diode

■ Reflow Soldering Temperature Profile



■ TO-252 Package Dimensions

Unit：mm

Symbol	Min	Nom	Max	Symbol	Min	Nom	Max
A	2.10		2.50	E	5.80		6.30
B	0.80		1.25	e1	2.25	2.30	2.35
b	0.50		0.85	e2	4.45		4.75
b1	0.50		0.90	L1	9.50		10.20
b2	0.45		0.60	L2	0.90		1.45
C	0.45		0.60	L3	0.60		1.10
D	6.35		6.75	K	-0.1		0.10
D1	5.10		5.50