



JSPK1045ACT

10A Schottky Barrier Rectifier

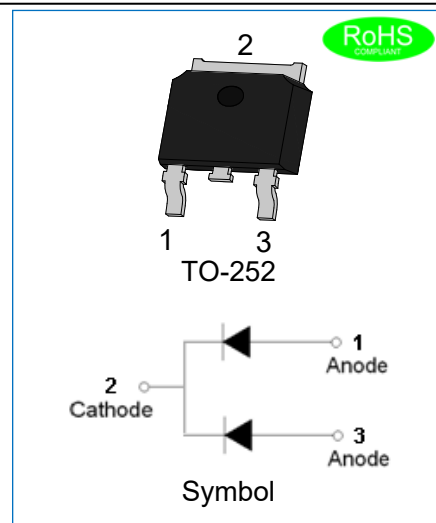
Rev.2.7

DESCRIPTION

- ✧ Plastic package has underwriters laboratories flammability classification 94V-0
- ✧ Lead free in compliance with EU RoHS 2011/65/EU directive
- ✧ Low forward voltage drop
- ✧ Low power losses, high efficiency operation
- ✧ High current capability and surge capability

MECHANICAL DATA

- ✧ Case: TO-252 molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002



ABSOLUTE MAXIMUM RATING (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	JSPK1045ACT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum RMS voltage	V_{RMS}	32	V
Maximum DC blocking voltage	V_{DC}	45	V
Average forward current at $T_C=100^\circ\text{C}$	$I_{F(AV)}$	10	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100	A
Operating junction temperature range	T_j	-55 to +125	°C
Storage temperature range	T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified.)

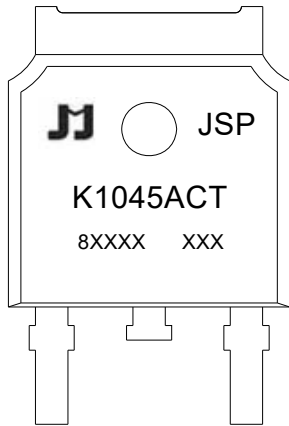
Parameter	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=5\text{A}$			0.65	V
Reverse current at rated DC blocking voltage	$T_A=25^\circ\text{C}$			0.1	mA
	$T_A=100^\circ\text{C}$			40	
Junction capacitance	$V_R=4.0\text{V}, f=1\text{MHz}$		500		pF

THERMAL RESISTANCES

Symbol	Parameter	JSPK1045ACT	Unit
$R_{th(j-c)}$	Thermal resistance from junction to case	6.5	°C/W



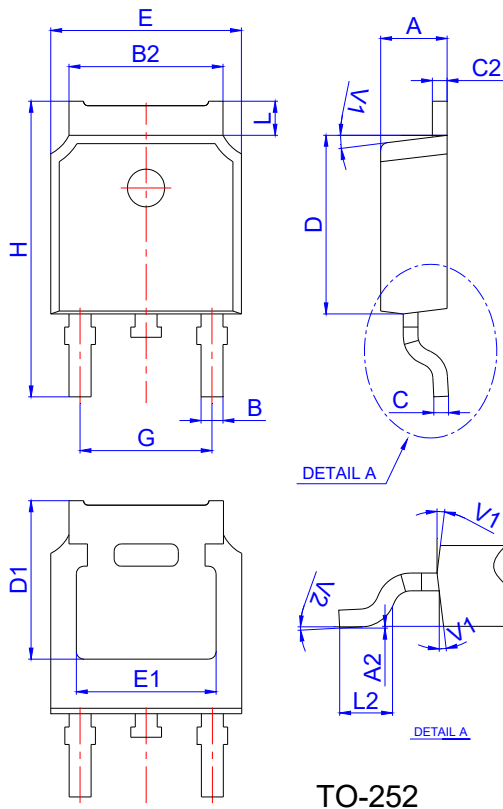
MARKING



JS	Schottky Barrier Rectifier
P	Planar technology
K	Package: TO-252
10	$I_{F(AV)}=10A$
45	$V_{RRM}:45V$
A	Version
CT	Common cathode

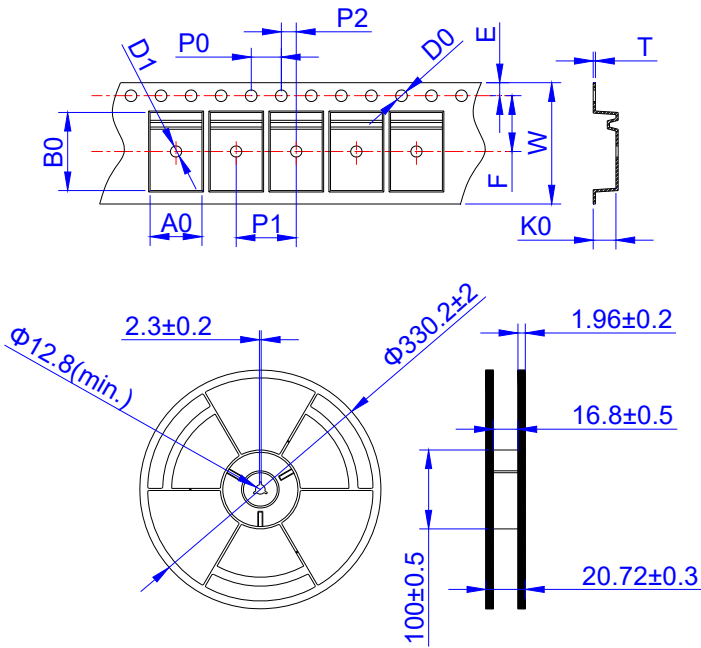
8	Year code(7:2017, 8:2018,.....)
XX	Week code
XX	Chip code
XXX	Package lot number

PACKAGE MECHANICAL DATA



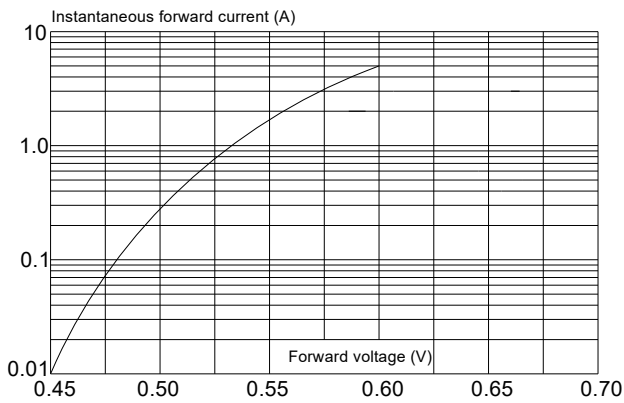
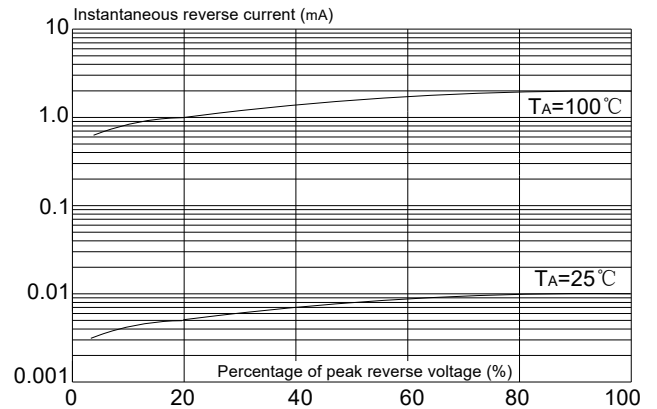
TO-252

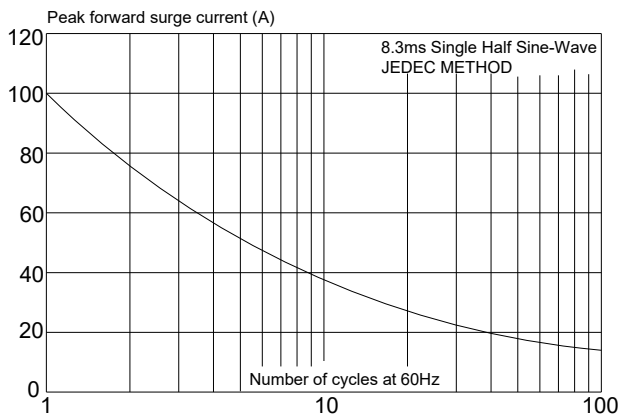
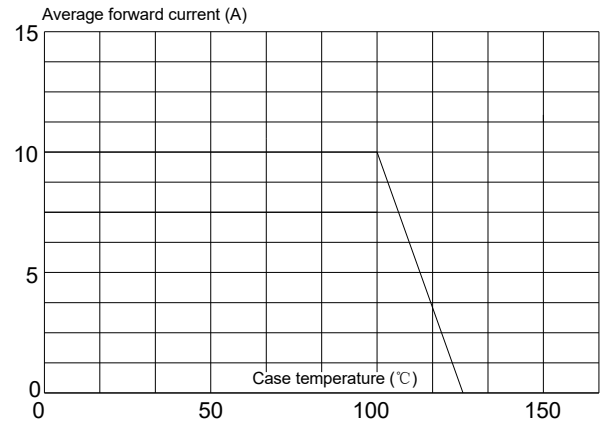
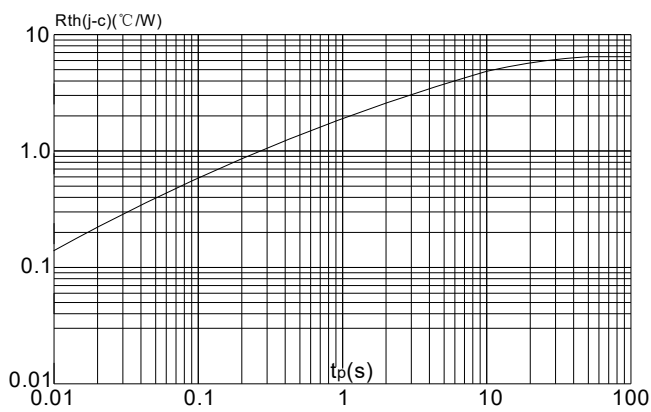
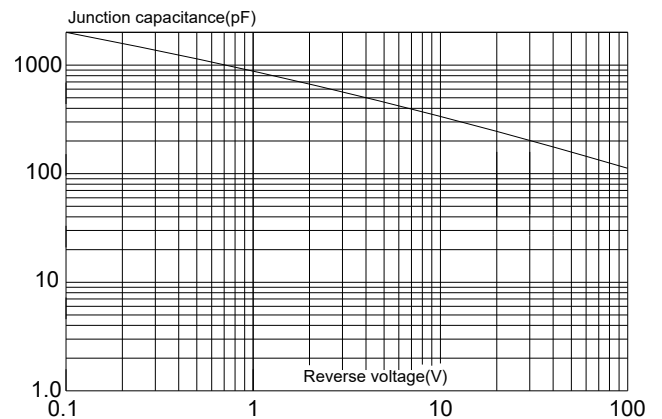
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0		0.15	0		0.006
B	0.66		0.86	0.026		0.034
B2	5.18		5.48	0.202		0.216
C	0.40		0.60	0.016		0.024
C2	0.44		0.58	0.017		0.023
D	5.90		6.30	0.232		0.248
D1	5.30REF			0.209REF		
E	6.40		6.80	0.252		0.268
E1	4.63			0.182		
G	4.47		4.67	0.176		0.184
H	9.50		10.70	0.374		0.421
L	1.09		1.21	0.043		0.048
L2	1.35		1.65	0.053		0.065
V1		7°			7°	
V2	0°		6°	0°		6°

REEL SPECIFICATION -TO-252


Ref.	Dimensions	
	Millimeters	Inches
W	Max:16.3	Max:0.642
E	1.75±0.10	0.069±0.004
F	7.50±0.10	0.295±0.004
D0	1.55±0.05	0.061±0.002
D1	Min:1.50	Min:0.059
P0	4.00±0.10	0.157±0.004
P1	8.00±0.10	0.315±0.004
P2	2.00±0.10	0.079±0.004
A0	6.90±0.10	0.272±0.004
B0	10.50±0.10	0.413±0.004
K0	2.70±0.10	0.106±0.004
T	0.30±0.05	0.012±0.002

OUTLINE	UNIT WEIGHT (g/PCS) TYP	REEL (PCS)	PER CARTON (PCS)	TAPE & REEL
TAPING	0.329	2,500	25,000	13inch

CHARACTERISTICS CURVE
FIG.1: Typical forward characteristics (25°C)

FIG.2: Typical reverse characteristics


CHARACTERISTICS CURVE
FIG.3: Maximum non-repetitive peak forward surge current

FIG.4: Forward current derating curve

FIG.5: Maximum transient thermal impedance

FIG.6: Typical junction capacitance


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