



**SCHOTTKY BARRIER SOLAR RECTIFIER**

**VOLTAGE 45 Volts CURRENT 16 Amperes**

**FEATURES**

- \* Low switching noise
- \* Low forward voltage drop
- \* Low thermal resistance
- \* High current capability
- \* High surge capability
- \* High reliability
- \* Ideal for solar panel PV application such as Bypass diode

**MECHANICAL DATA**

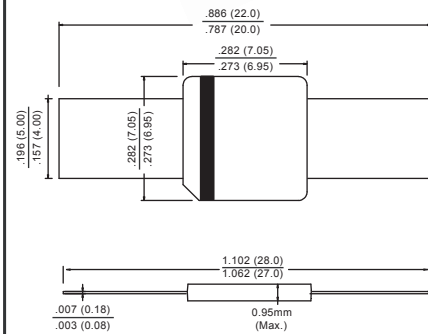
- \* Case: ThinPAQ
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202B method 208C guaranteed
- \* Mounting position: Any

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.



**ThinPAQ**



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

RATINGS	SYMBOL	SPKC1645FL	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	45	Volts
Maximum RMS Voltage	$V_{RMS}$	31.5	Volts
Maximum DC Blocking Voltage	$V_{DC}$	45	Volts
Maximum DC Forward Current @ $T_L=125^{\circ}C$ (Note 1)	$I_o$	16	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	300	Amps
Typical Current Square Time	$I^2T$	373.3	A <sup>2</sup> S
Operating Temperature Range	$T_J$	175( $T_j \leq 200C$ in Bypass Mode)	°C
Storage Temperature Range	$T_{STG}$	-55 to + 175	°C

**ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	SPKC1645FL	UNITS
Maximum Instantaneous Forward Voltage at 16 A DC	@ $T_A = 25^{\circ}C$	.55	Volts
	@ $T_A = 75^{\circ}C$	.47	
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^{\circ}C$	100	uA
	@ $T_A = 75^{\circ}C$	2.5	mA

- NOTES : 1. Heat-sink mounted 10mm max from body  
 2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
 3. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

2011-07  
REV: O

## RATING AND CHARACTERISTICS CURVES ( SPKC1645FL )

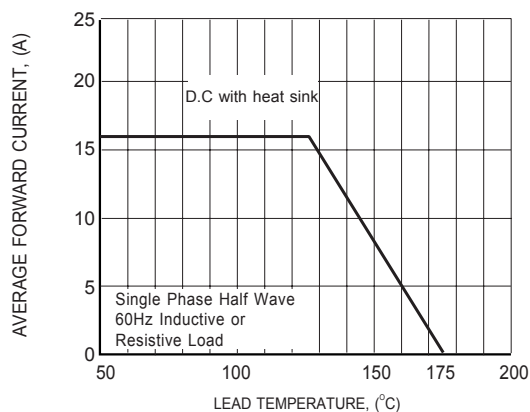


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

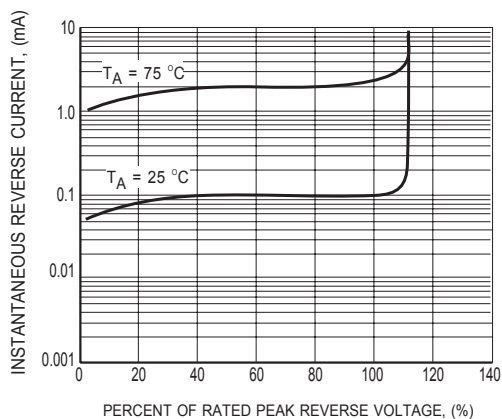


FIG.2 TYPICAL REVERSE CHARACTERISTICS

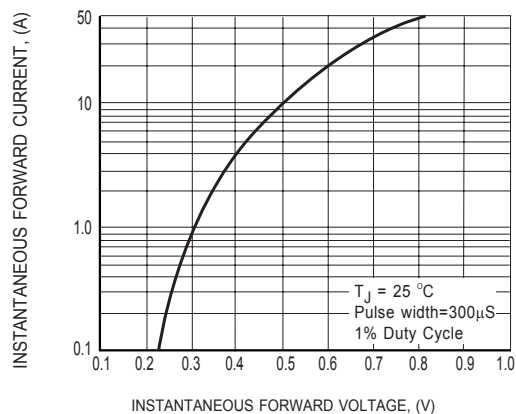


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

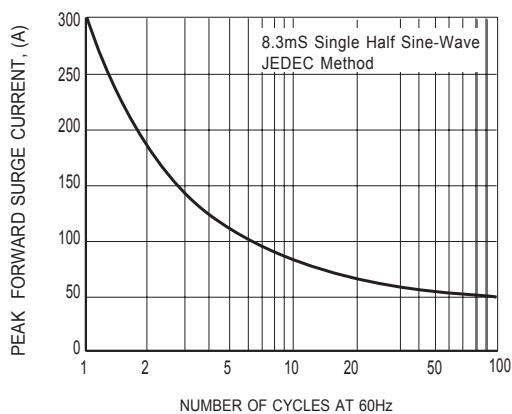
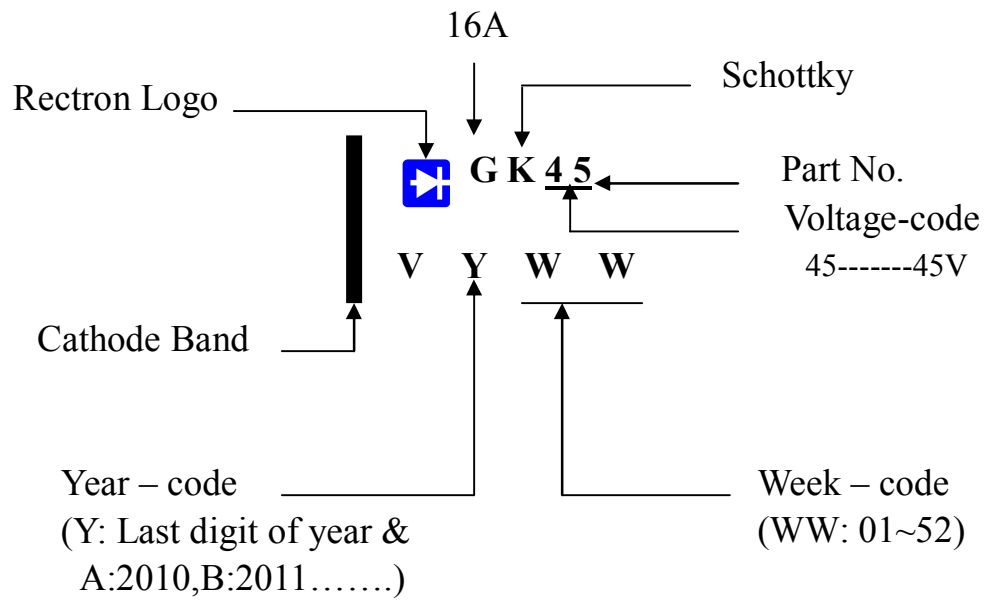
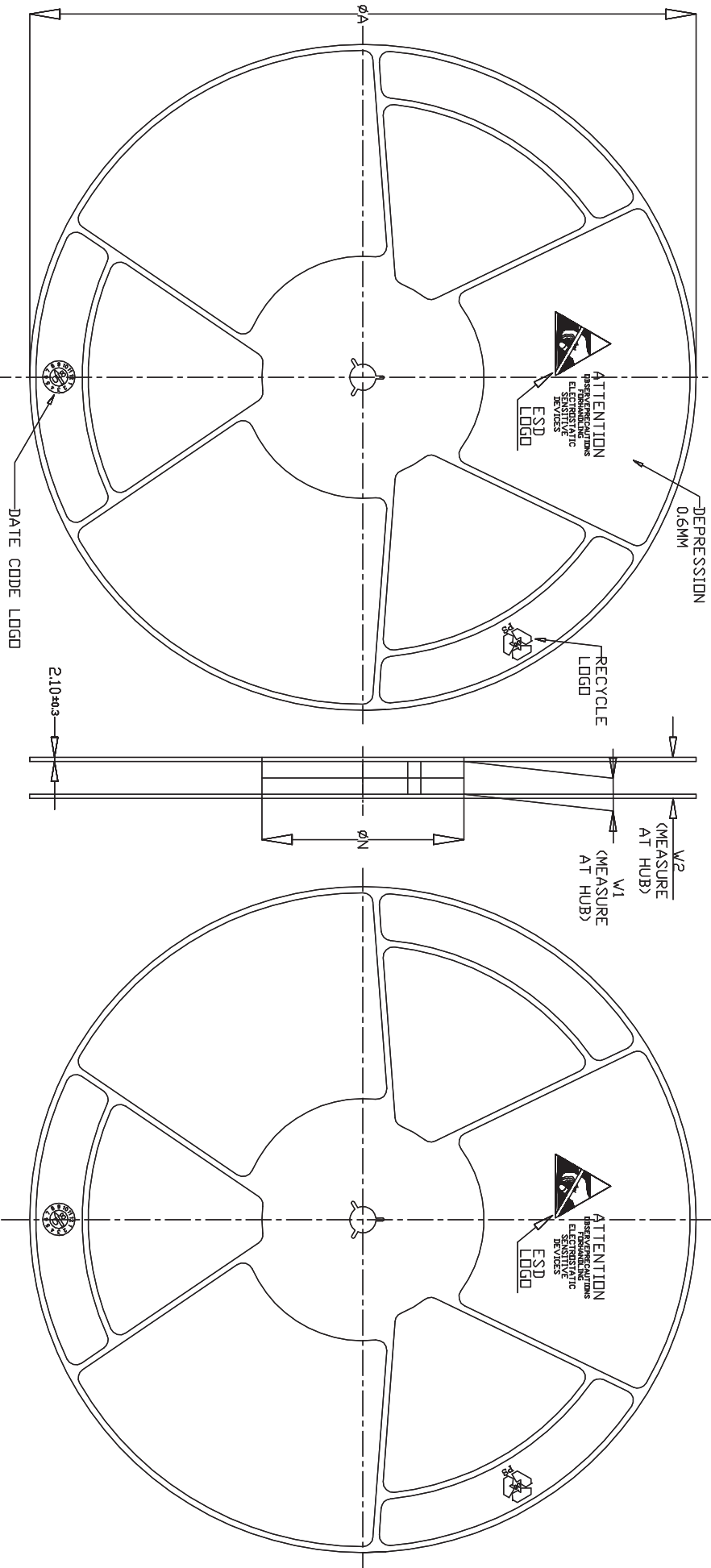


FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

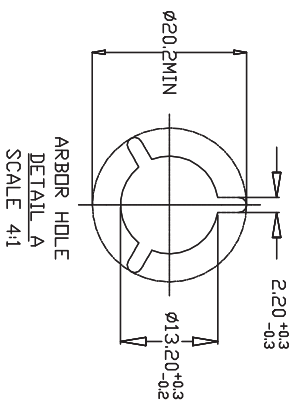
## Marking Description





PRODUCT SPECIFICATIONS

TAPE WIDTH	A*±	N*±	W1*±	W2(MAX)
44MM	330	100	44.4	51.4



NOTE:  
1. PRODUCT DRAWING ONLY

TITLE : 13X4 WELDED REEL

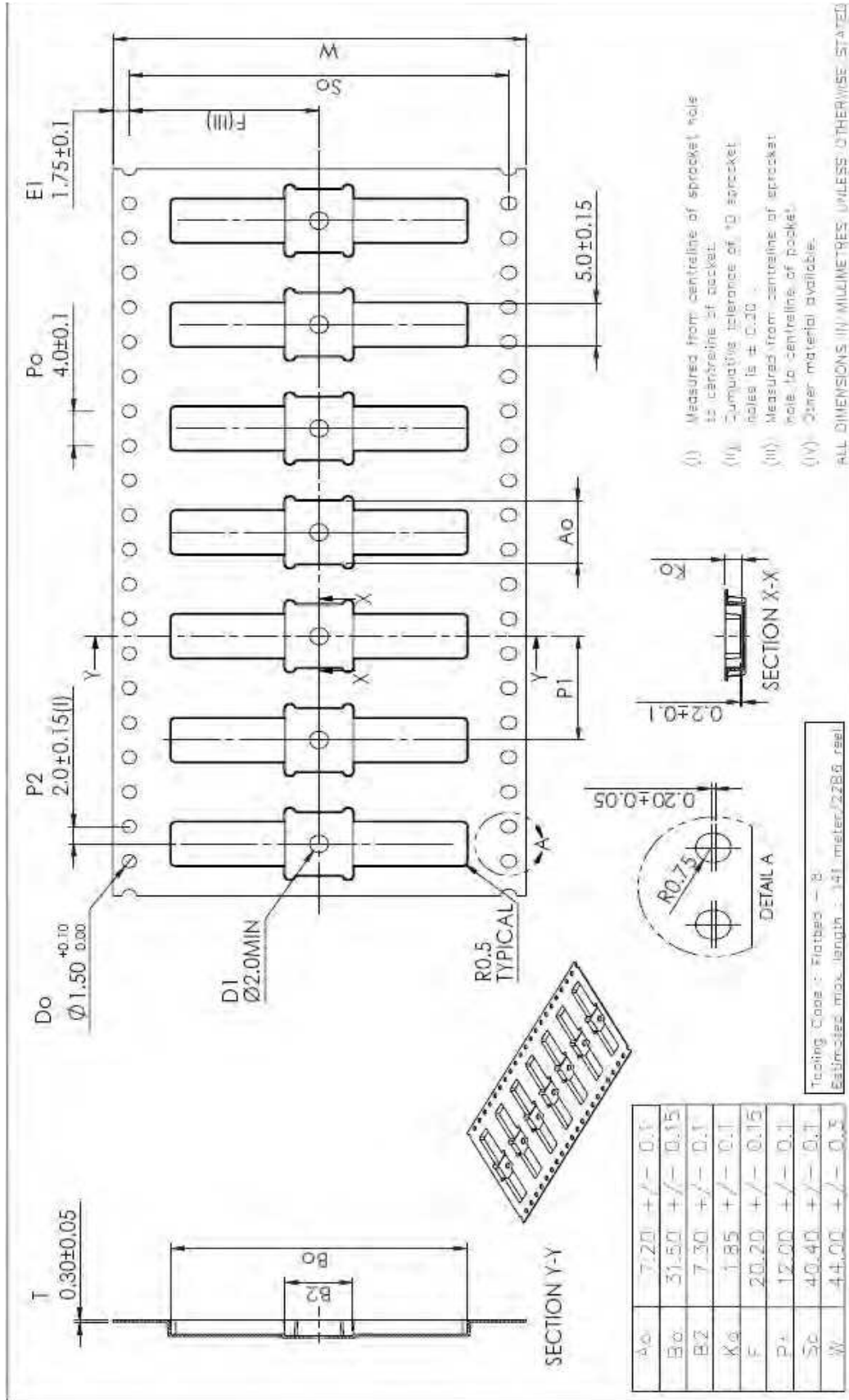
S.R :	---	TOOL NO :	---	TOLERANCE :	---
SCALE :	NTS	SHRINKAGE :	0.45%	PS	XX ±0.25
REV. :	000000	MATERIAL :	---	MM	XXX ±0.13
UNIT :	MM	WARPAGE :	---	---	---
SHT :	1/1	NAME :	---	DATE :	ANGLE : ±30°
---	---	DRAWN :	ZATT	07/01/09	XX ±15°
---	---	CHECK :	KC LEE	07/01/09	XX ±15°

DWG-REF.	REV.
42WE0070	A



# REEL TAPING SPECIFICATIONS

Unit: mm



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