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## SMD General Purpose Rectifiers



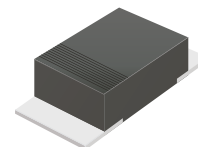
# CGRKM4001-HF Thru. CGRKM4007-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free



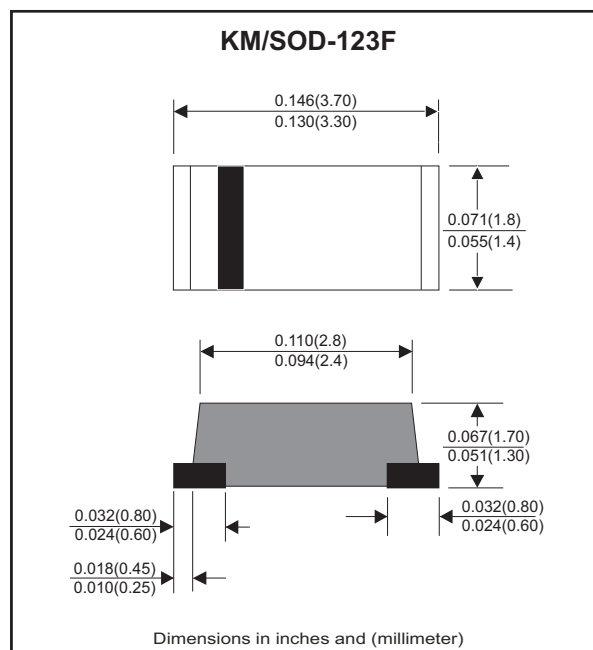
### Features

- Ideal for surface mount applications
- Easy pick and place
- Exceeds environmental standard MIL-STD-19500/228
- Low leakage current

### Mechanical data

- Epoxy: UL94V-0 rated flame retardant
- Case: Molded plastic, SOD-123F
- Terminals: Solderable per MIL-STD-750, method 2026
- Polarity: Indicated by cathode band
- Weight: 0.027 grams approx.

### Circuit diagram



### Maximum Ratings (at T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	CGRKM 4001-HF	CGRKM 4002-HF	CGRKM 4003-HF	CGRKM 4004-HF	CGRKM 4005-HF	CGRKM 4006-HF	CGRKM 4007-HF	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum averaged forward current	I <sub>o</sub>	1.0							A
Maximum Instantaneous forward voltage at I <sub>F</sub> =1.0A	V <sub>F</sub>	1.1				1.0	1.1		V
Forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30							A
Reverse current at rated DC blocking voltage	@T <sub>A</sub> =25°C	5							μA
	@T <sub>A</sub> =100°C	50							
Thermal resistance, junction to ambient air	R <sub>θJA</sub>	60							°C/W
Operating junction temperature	T <sub>J</sub>	-55 to +150							°C
Storage temperature range	T <sub>STG</sub>	-65 to +170							°C
Junction capacitance f=1MHz and applied 4V DC reverse voltage	C <sub>J</sub>	15							pF

Notes: 1. Thermal resistance from junction to ambient and from junction to lead mounted on 0.2x0.2"(5.0x5.0mm) copper pad areas.

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## Rating and Characteristic Curves (CGRKM4001-HF Thru. CGRKM4007-HF)

Fig.1- Current Derating Curve

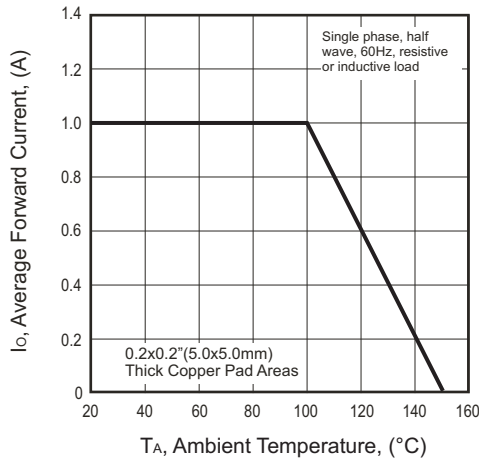


Fig.2- Forward Characteristics

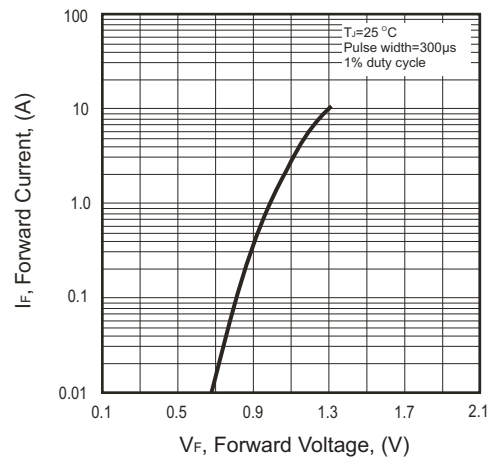


Fig.3- Non-repetitive Forward Surge Current

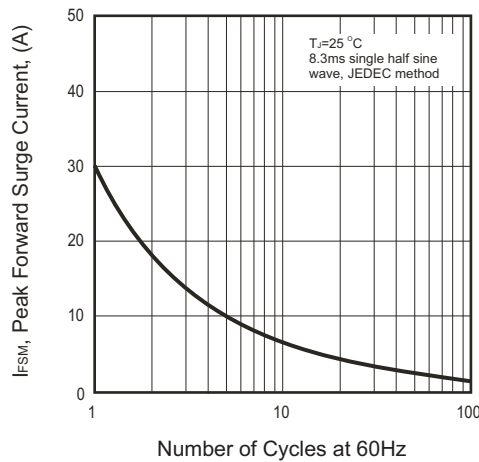


Fig.4- Reverse Characteristics

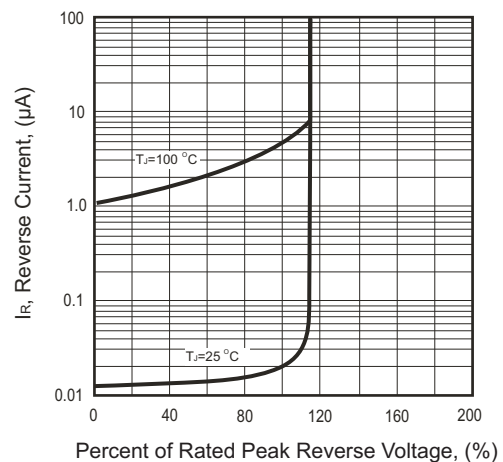
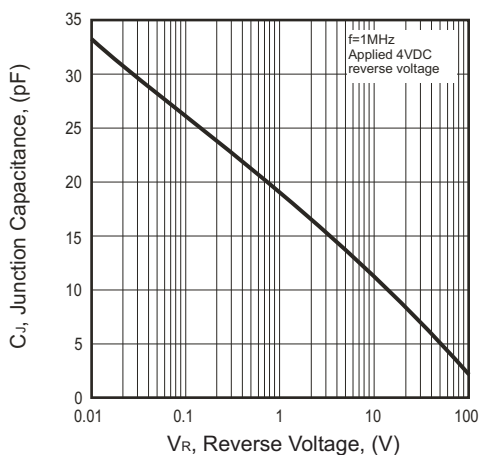


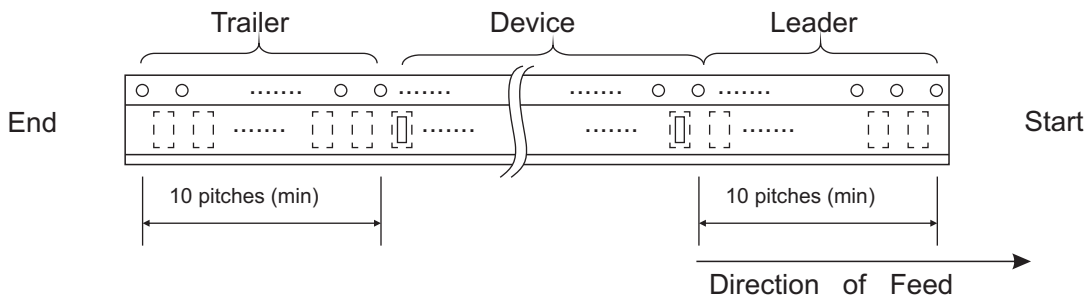
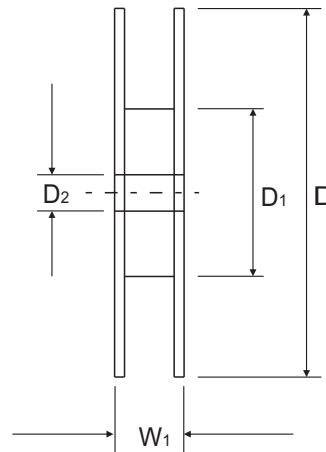
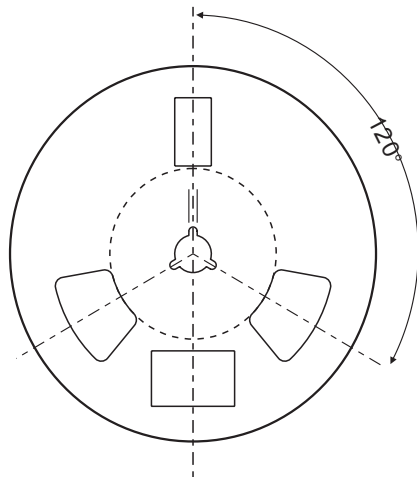
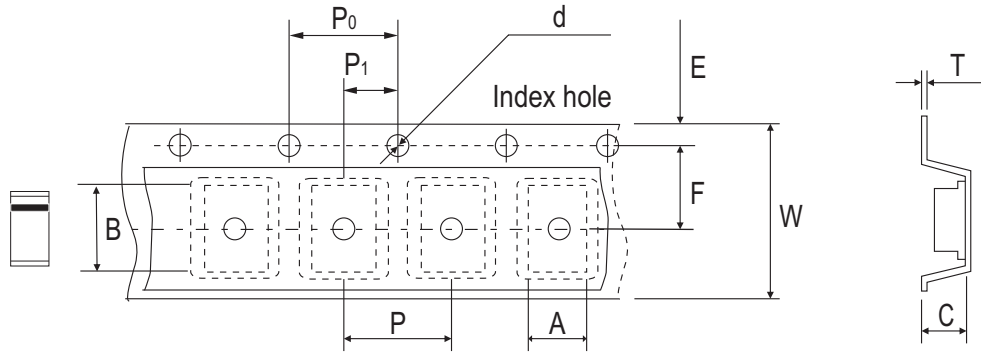
Fig.5- Junction Capacitance



# SMD General Purpose Rectifiers



## Reel Taping Specification



KM/ SOD-123F	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.90 ± 0.10	3.90 ± 0.10	1.68 ± 0.10	1.50 ± 0.10	178 ± 2.00	62.0 MIN.	13.0 ± 0.50
	(inch)	0.075 ± 0.04	0.154 ± 0.04	0.066 ± 0.04	0.059 ± 0.004	7.00 ± 0.079	2.440 MIN.	0.512 ± 0.020

KM/ SOD-123F	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	8.00 ± 0.30	11.40 ± 1.0
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.004	0.315 ± 0.012	0.449 ± 0.004

# SMD General Purpose Rectifiers



## Marking Code

Part Number	Marking Code
CGRKM4001(T)-HF	A1
CGRKM4002(T)-HF	A2
CGRKM4003(T)-HF	A3
CGRKM4004(T)-HF	A4
CGRKM4005(T)-HF	A5
CGRKM4006(T)-HF	A6
CGRKM4007(T)-HF	A7

Note:

1) Suffix code after part number to specify packaging item .

Packaging	Code
REEL PACK 7"	NA
REEL PACK 13"	T

## Week Code

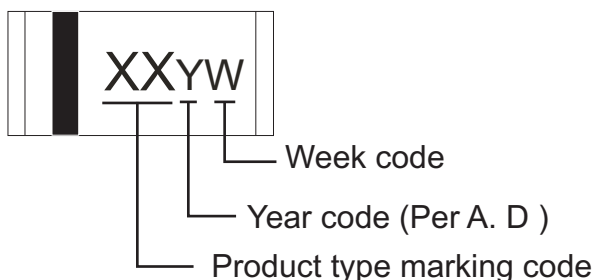
Week	Code	Week	Code	Week	Code	Week	Code
1	A	14	N	27	A	40	N
2	B	15	O	28	B	41	O
3	C	16	P	29	C	42	P
4	D	17	Q	30	D	43	Q
5	E	18	R	31	E	44	R
6	F	19	S	32	F	45	S
7	G	20	T	33	G	46	T
8	H	21	U	34	H	47	U
9	I	22	V	35	I	48	V
10	J	23	W	36	J	49	W
11	K	24	X	37	K	50	X
12	L	25	Y	38	L	51	Y
13	M	26	Z	39	M	52	Z

## Year Code

Y = Year code (Per A. D )  
 (2012: 2 , 2013: 3 , .....)

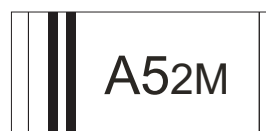
## Product code printed

### - From 1~26 Weeks

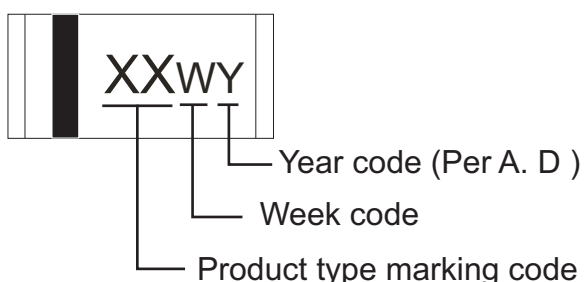


For example as follows:

P/N: CGRKM4005-HF  
 Manufacture date\_ Year: 2012 / Week:13  
 Product code printed: A52M



### - From 27~52 Weeks



For example as follows:

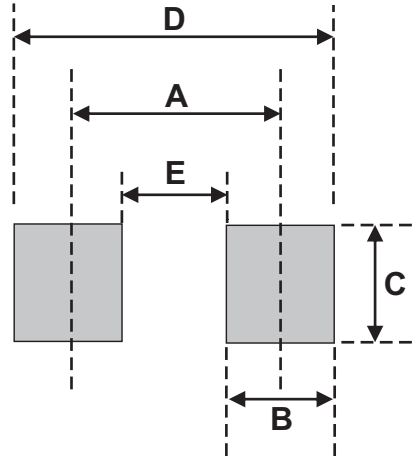
P/N: CGRKM4005-HF  
 Manufacture date\_ Year: 2012 / Week: 39  
 Product code printed: A5M2



## SMD General Purpose Rectifiers

### Suggested PAD Layout

SIZE	KM/SOD-123F	
	(mm)	(inch)
A	3.30	0.130
B	1.40	0.055
C	1.90	0.075
D	4.70	0.185
E	1.90	0.075



### Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
KM/ SOD-123F	2,500	7
	10,000	13