

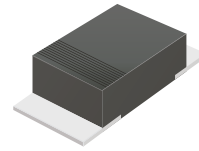
## CGRKM4001-HF Thru. CGRKM4007-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

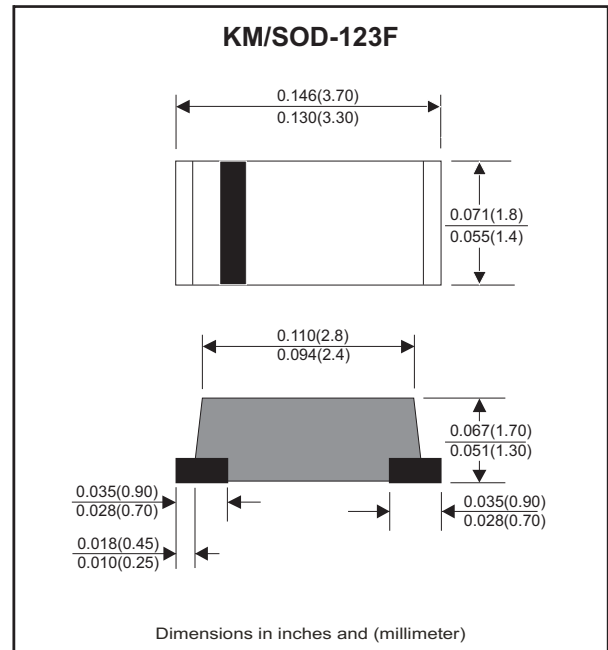


### Features

- Ideal for surface mount applications
- Easy pick and place
- Exceeds environmental standard MIL-STD-19500/228
- Low leakage current
- Qualified according AEC-Q101

### Mechanical data

- Epoxy: UL94-V0 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 $T_A=25^\circ\text{C}$ 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	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum averaged forward current	$I_o$	1.0							A
Maximum Instantaneous forward voltage at $I_F=1.0A$	$V_F$	1.1				1.0	1.1		V
Forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							A
Reverse current at rated DC blocking voltage	$I_R$	@ $T_A=25^\circ\text{C}$	5						$\mu\text{A}$
		@ $T_A=100^\circ\text{C}$	50						
Thermal resistance, junction to ambient air	$R_{\theta JA}$	60							$^\circ\text{C/W}$
Operating junction temperature	$T_J$	-55 to +150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-65 to +170							$^\circ\text{C}$
Junction capacitance $f=1\text{MHz}$ and applied 4V DC reverse voltage	$C_J$	15							pF

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

Fig.1- Current Derating Curve

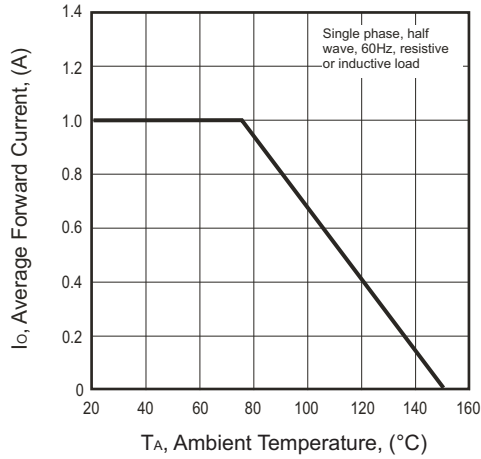


Fig.2- Forward Characteristics

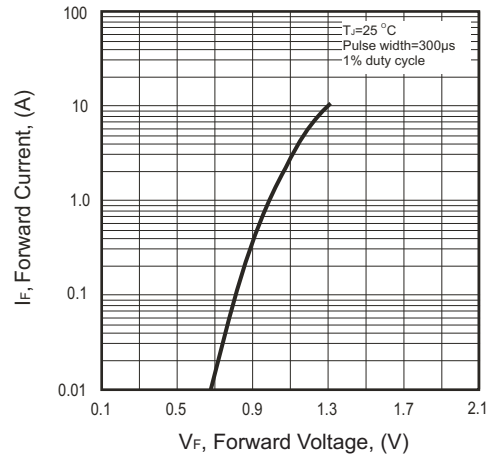


Fig.3- Non-repetitive Forward Surge Current

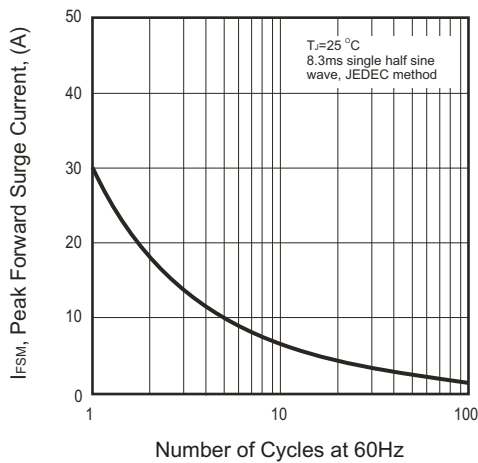


Fig.4- Reverse Characteristics

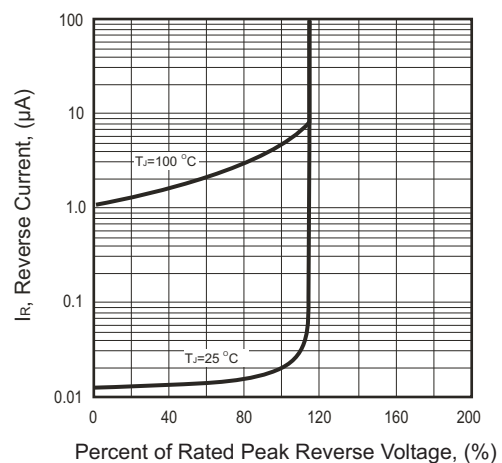
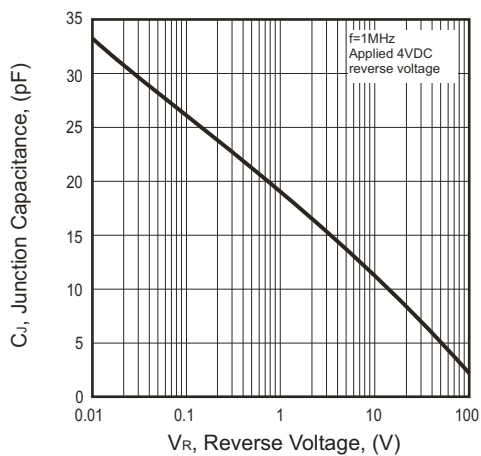
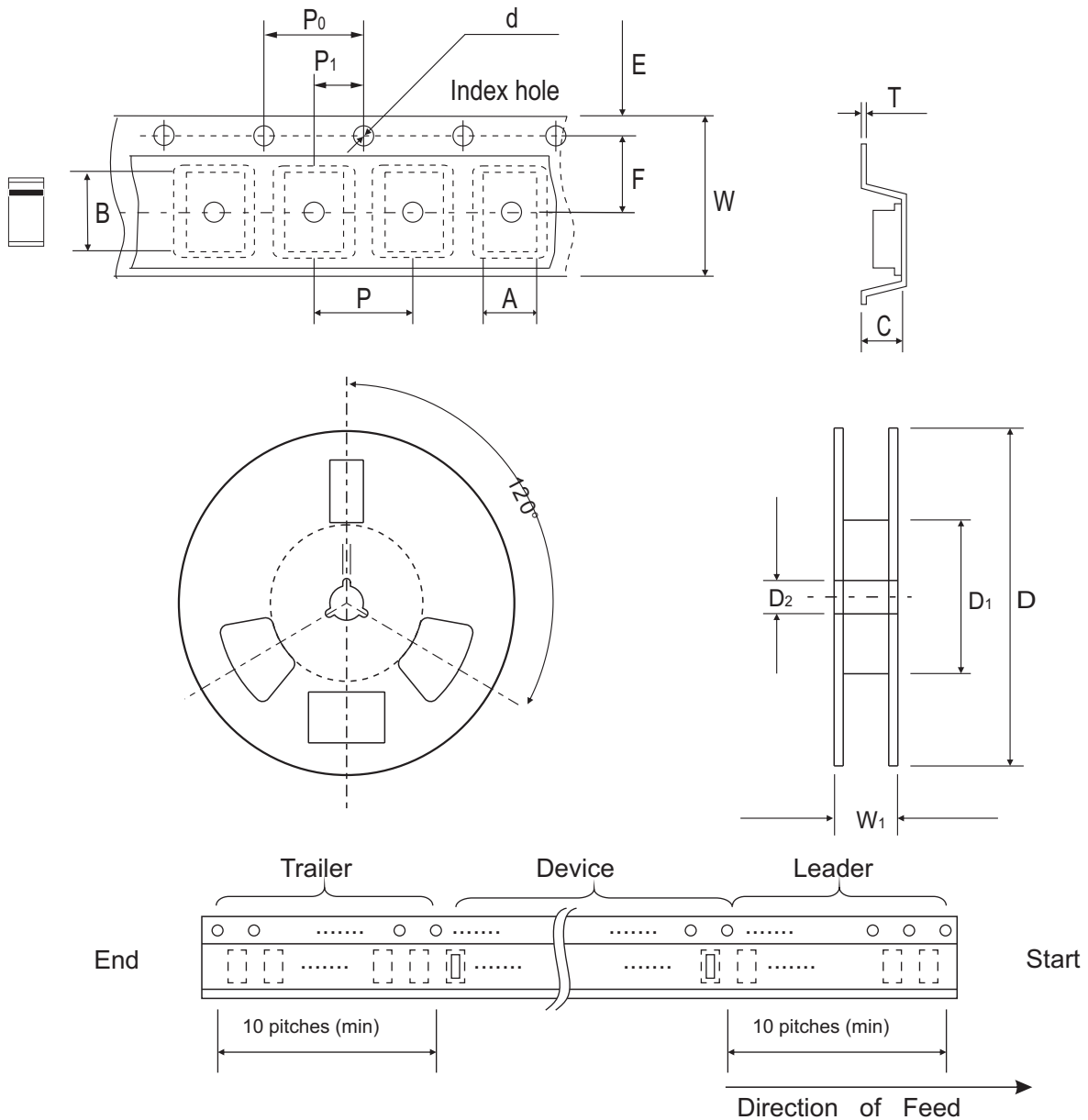


Fig.5- Junction Capacitance



## Reel Taping Specification



KM/SOD-123F	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(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	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(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

## Marking Code

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

## Week Code

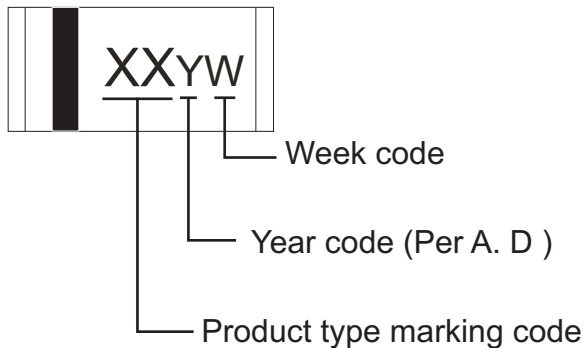
Week	Code	Week	Code	Week	Code	Week	Code
1	A	14	N	27	A	40	N
2	B	15	O	28	B	41	O
3	C	16	P	29	C	42	P
4	D	17	Q	30	D	43	Q
5	E	18	R	31	E	44	R
6	F	19	S	32	F	45	S
7	G	20	T	33	G	46	T
8	H	21	U	34	H	47	U
9	I	22	V	35	I	48	V
10	J	23	W	36	J	49	W
11	K	24	X	37	K	50	X
12	L	25	Y	38	L	51	Y
13	M	26	Z	39	M	52	Z

## Year Code

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

## Product code printed

### - From 1~26 Weeks

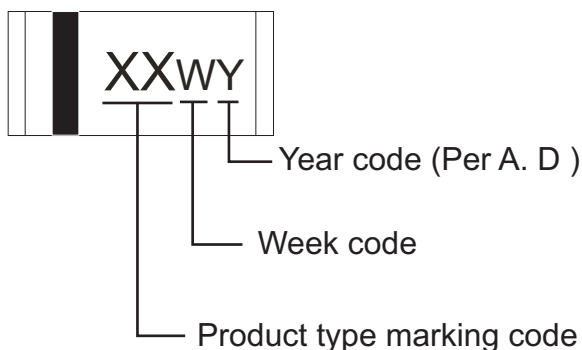


For example as follows:

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

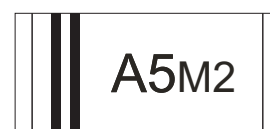


### - From 27~52 Weeks



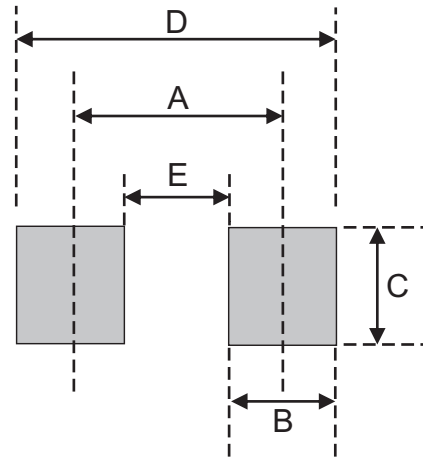
For example as follows:

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



## 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	Qty Per Reel	Reel Size
	(Pcs)	(inch)
KM/SOD-123F	2,500	7