

Features

- Negative temperature coefficient capability to protect the LED at high temperature
- Excellent current regulation ability during whole temperature range(-40°C to +150°C)
- High Reliability
- High dynamic impedance



eSGA(SOD-123FL)

Description

Current regulating diode GCR301 supplies constant current to an electric circuit, even when power supply voltage fluctuations or load impedance fluctuations occur. The GCR301 is used for current stabilization and current limiting.



Schematic Diagram

Absolute Maximum Ratings

(T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	500	mW
Max. Work Voltage	V _{MAX}	100	V
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-40 to +150	°C
Typical Thermal Resistance, Junction to Ambient	R _{θJA}	250	°C/W

Electrical Characteristics

(T_A=25°C unless otherwise specified)

P/N	Marking Code	Regulator Current I _P @ V _T = 10V			Knee Current		Limiting Current Ratio	Temperature Coefficient
		Min	Nom	Max	@V _K	I _K	I _{100V} / I _P	25°C to 50°C
		mA	mA	mA	(V)		I _{30V} / I _P	%/°C
GCR301	301	0.20	0.30	0.42	0.8	min 0.8I _p	max 1.1 (I _{100V} / I _P)	+0.40 to -0.20

Typical Characteristic Curves

eSGA(SOD-123FL)

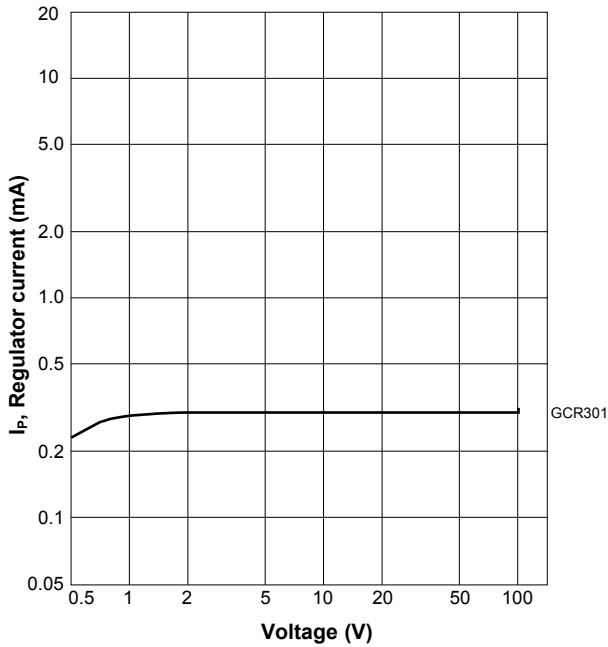


Fig.1 Regulator Voltage vs Current

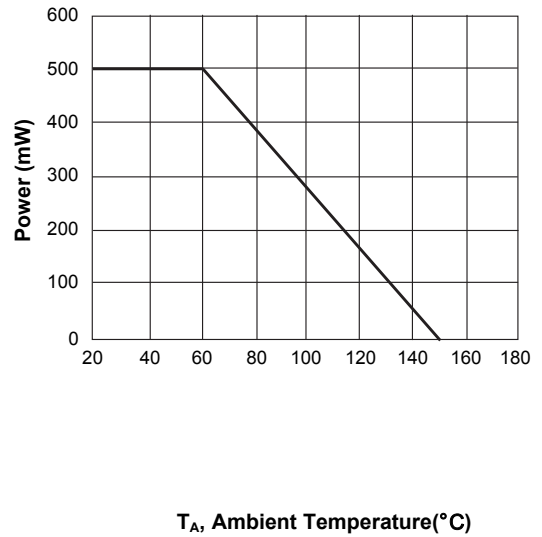


Fig.2 Power Derating Curve

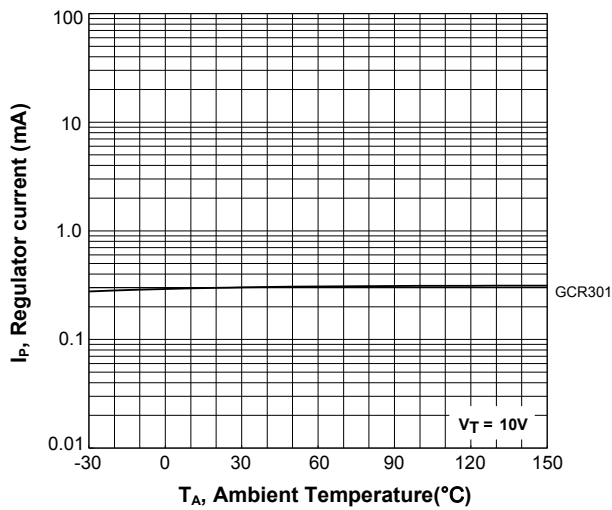


Fig.3 Nominal Regulator Current vs Temperature

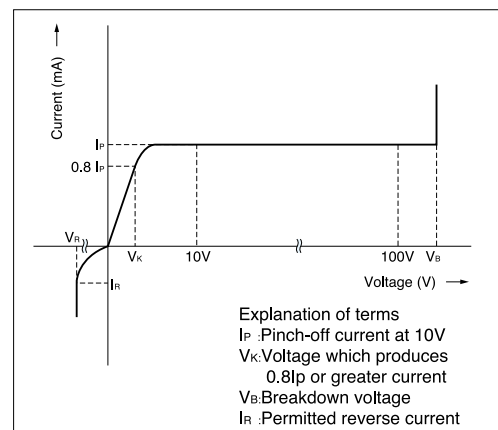
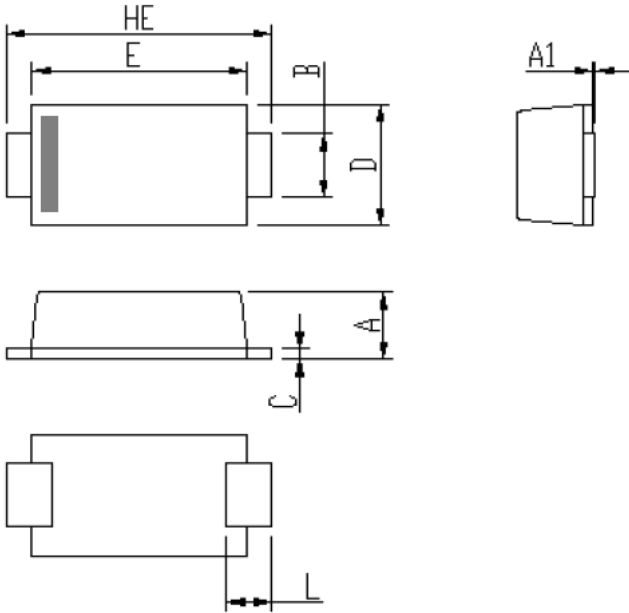


Fig.4 Basic Characteristics

Product Dimensions

eSGA(SOD-123FL)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0	0.004
B	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.01
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Order Information

Device	Package	Marking Code	Carrier	Quantity	HSF Status
GCR301	eSGA (SOD-123FL)	301	Tape & Reel	3000pcs / Reel	RoHS Compliant