

CSRS065V0-G/CSRS045V0-G/CSRS085V0-G

Working Voltage: 5Volts

RoHS Device

Features

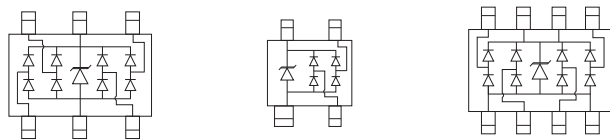
- Fast Reverse Recovery Time.
- Fast Turn on Time.
- Low Capacitance SMD Packages.
- 16kV IEC61000-4-2 capable.

Mechanical Data

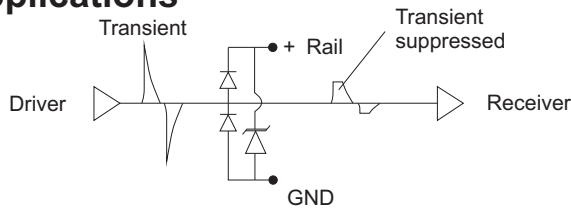
- Case: SOT-23-6 for CSRS065V0-G,
- SOT-143 for CSRS045V0-G,
- SOIC-8 for CSRS085V0-G.

Circuit Diagram

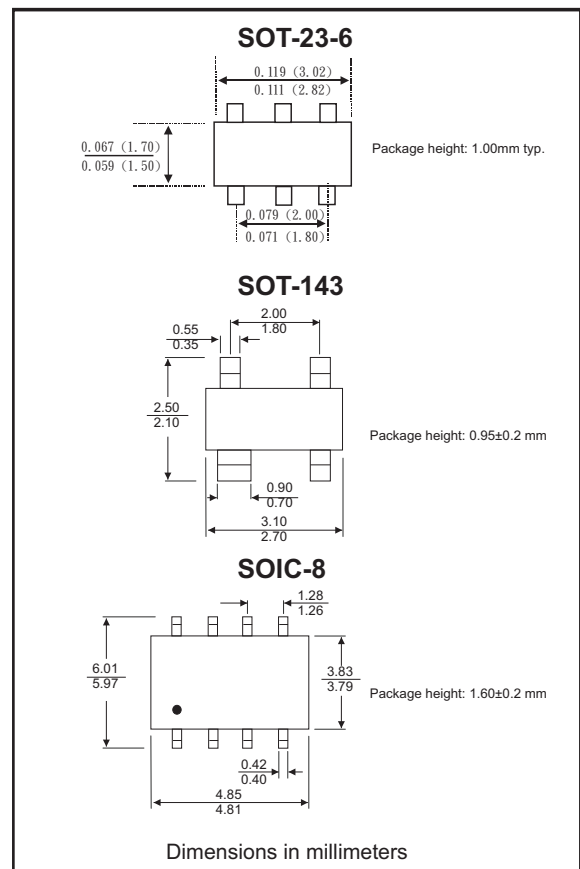
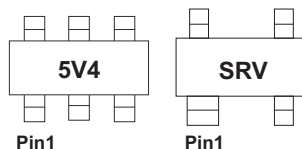
CSRS065V0-G CSRS045V0-G CSRS085V0-G



Applications



Marking



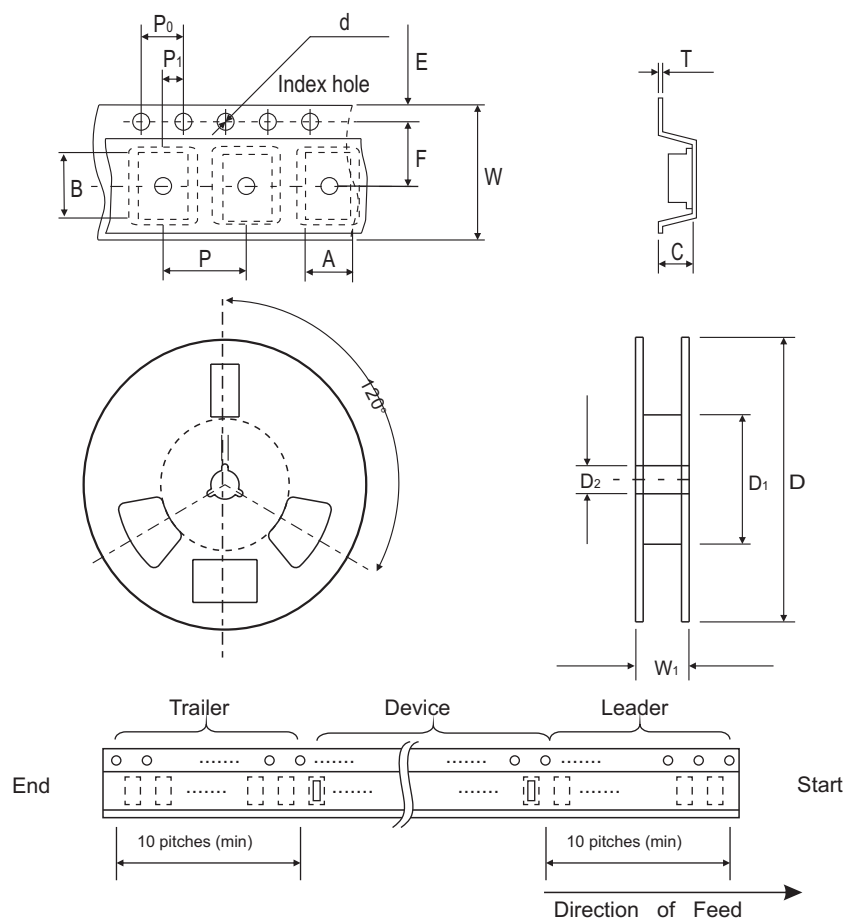
Maximum Rating (at TA=25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Operating temperature range	T _{OP}	-55 to +150	°C

Electrical Characteristics (at TA=25 °C unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Max.	Unit
Forward voltage	I _F =50mA	V _F		1.2	V
Reverse stand-off voltage		V _{RWM}		5.0	V
Reverse breakdown voltage	I _R =1μA	V _R	6.0		V
Reverse leakage current	5.0V	I _L		5.0	μA
Capacitance	f=1MHz, V _R =0V, Line to ground f=1MHz, V _R =0V, Line to Line	C _T		5.0	pF
Peak ESD voltage capability	IEC 61000-4-2	V _{PV}		16	kV
Peak TVS pulse power	T _P =8/20 μS	V _{TV}		300	W

Reel Taping Specification



	SYMBOL	A	B	C	d	D	D ₁	D ₂
SOT-23-6	(mm)	3.17 ± 0.10	3.23 ± 0.10	1.37 ± 0.10	1.55 ± 0.10	178 ± 1	50.0 MIN.	13.0 ± 0.20
	(inch)	0.124 ± 0.004	0.127 ± 0.004	0.054 ± 0.004	0.061 ± 0.004	7.008 ± 0.040	1.969 MIN.	0.512 ± 0.008
SOT-143	(mm)	3.15 ± 0.10	3.50 ± 0.10	1.30 ± 0.20	1.55 ± 0.05	178 ± 1	50.0 MIN.	13.0 ± 0.20
	(inch)	0.124 ± 0.004	0.138 ± 0.004	0.051 ± 0.008	0.061 ± 0.002	7.008 ± 0.04	1.969 MIN.	0.512 ± 0.008
SOIC-8	(mm)	6.50 ± 0.10	5.30 ± 0.10	2.50 ± 0.20	1.50 ± 0.10	330 ± 1	50.0 MIN.	13.5 ± 1
	(inch)	0.256 ± 0.004	0.209 ± 0.004	0.098 ± 0.008	0.059 ± 0.004	12.992 ± 0.04	1.969 MIN.	0.531 ± 0.04

	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
SOT-23-6	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.22 ± 0.05	8.00 ± 0.30	14.4 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.002	0.315 ± 0.012	0.567 MAX.
SOT-143	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.22 ± 0.05	8.00 ± 0.20	14.4 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.008 ± 0.002	0.315 ± 0.008	0.567 MAX.
SOIC-8	(mm)	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.22 ± 0.05	12.0 ± 0.20	18.4 MAX.
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.008 ± 0.002	0.472 ± 0.008	0.724 MAX.

Rating and Characteristic Curves (CSRS-G Series)

Fig.1 Pulse Power vs. Time

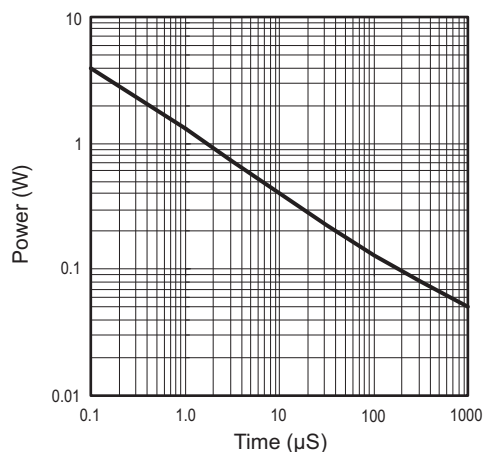


Fig.2 Power Derating

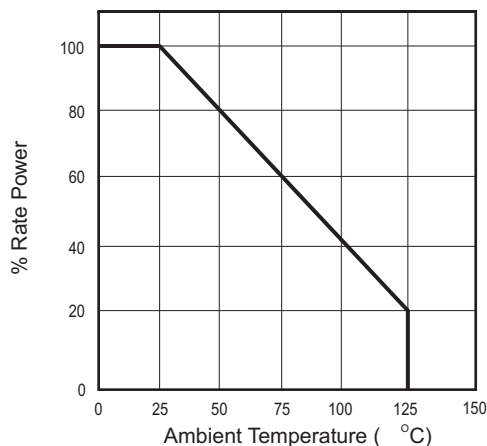


Fig.3 Pulse Waveform

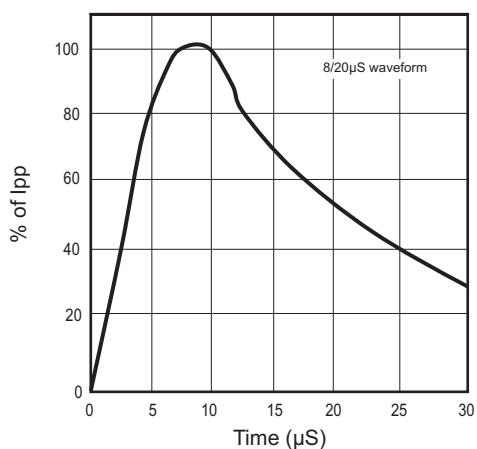


Fig.4 Clamp Voltage vs. Pulse Current

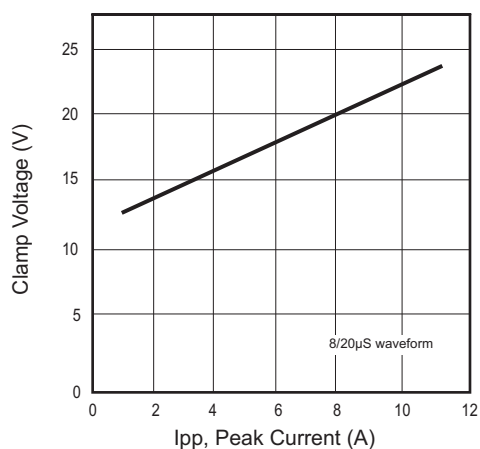


Fig.5 Forward Voltage vs. Forward Current

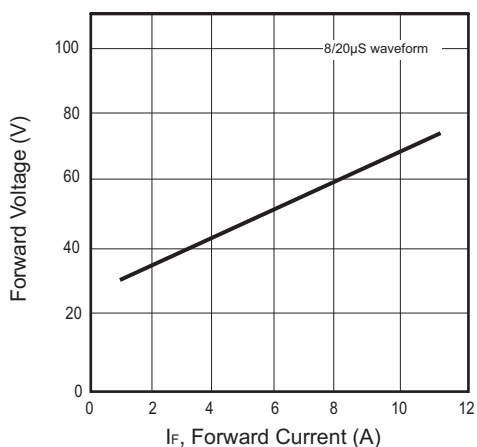
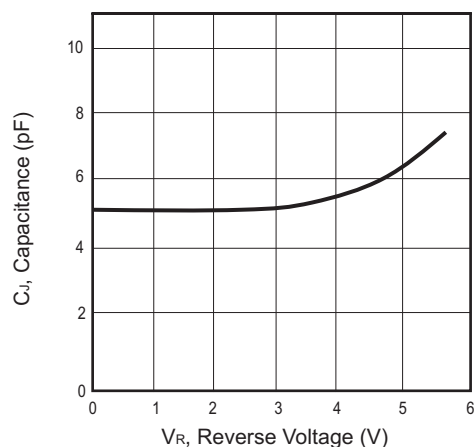
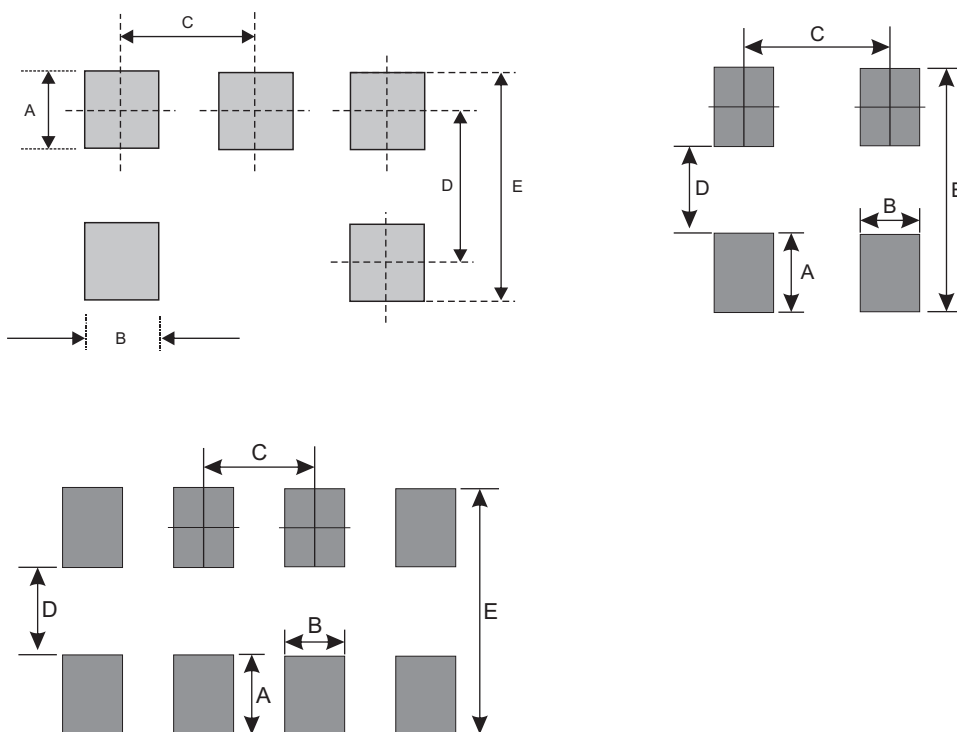


Fig.6 Capacitance vs. Reverse Voltage



Suggested PAD Layout

SIZE	SOT-23-6		SOT-143		SOIC-8	
	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)
A	1.10	0.043	1.40	0.055	2.40	0.094
B	0.60	0.024	0.70	0.028	0.70	0.028
C	0.95	0.037	1.90	0.075	1.27	0.050
D	2.50	0.098	0.81	0.032	2.50	0.098
E	5.00	0.196	3.60	0.142	7.30	0.287



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
SOT-23-6	3000	7
SOT-143	3000	7
SOIC-8	2500	13