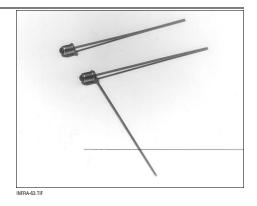
SD1410

Silicon Photodarlington

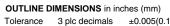
FEATURES

- Compact metal can coaxial package
- 24° (nominal) acceptance angle
- High output currents
- · Wide sensitivity ranges
- · Wide operating temperature range (- 55°C to +125°C)
- Mechanically and spectrally matched to SE1450 and SE1470 infrared emitting diodes



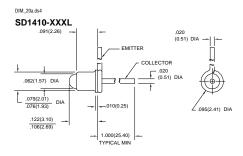
DESCRIPTION

The SD1410 is an NPN silicon photodarlington mounted in a glass lensed metal can coaxial package. The package may have a tab or second lead welded to the can as an optional feature (SD1410-XXXL). Both leads are flexible and may be formed as required to fit various mounting configurations.



3 plc decimals ±0.005(0.12) 2 plc decimals ±0.020(0.51)

SD1410-XXX EMITTER COLLECTOR .020(0.51) DIA -ŧ .062(1.57) DIA .079(2.01) .076(1.93) DIA -.010(0.25) .122(3.10) .106(2.69) 1.000(25.40)



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SD1410

Silicon Photodarlington

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)						
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Light Current	lL I				mA	V _{CE} =5 V
SD1410-001, SD1410-001 L		0.6				H=0.2 mW/cm ^{2 (1)}
SD1410-002, SD1410-002 L		2.0				
SD1410-003, SD1410-003 L		4.0				
SD1410-004, SD1410-004 L		8.0				
Collector Dark Current	ICEO			250	nA	V _{CE} =10 V, H=0
Collector-Emitter Breakdown Voltage	V(BR)CEO	15			V	Ic=100 μA
Emitter-Collector Breakdown Voltage	V(BR)ECO	5.0			V	I _E =100 μA
Collector-Emitter Saturation Voltage	VCE(SAT)			1.1	V	Ic=1 mA
						H=1 mW/cm ²
Angular Response (2)	Ø		24		degr.	IF=Constant
Rise And Fall Time	t _r , t _f		75		μs	Vcc=5 V, IL=1 mA
						RL=100 Ω

Notes 1. The radiation source is a tungsten lamp operating at a color temperature of 2870°K, 2. Angular response is defined as the total included angle between the half sensitivity points.

15 V

5 V

75 mW (1) -55°C to 125°C

260°C

-65°C to 150°C

ABSOLUTE MAXIMUM RATINGS

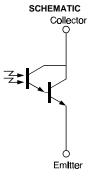
(25°C Free-Air Temperature unless otherwise noted) Collector-Emitter Voltage Emitter-Collector Voltage Power Dissipation Operating Temperature Range Storage Temperature Range Soldering Temperature (10 sec)

Notes

1. Derate linearly from 25°C free-air temperature at the rate of 0.71 mW/°C.

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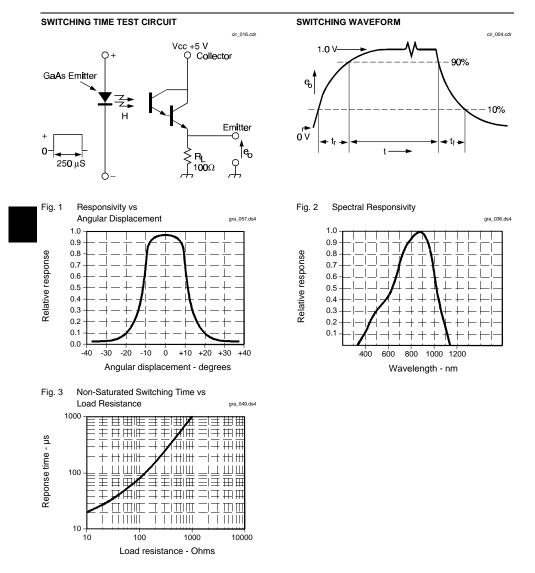
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SD1410

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All Performance Curves Show Typical Values





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