

ABSOLUTE MAXIMUM RATINGS
(25°C unless otherwise specified)

Storage Temperature _____ -55°C to + 125°C
Operating Temperature _____ -30°C to + 100°C
Lead Soldering Temperature
(1/16 inch (1.6mm) from case for 10 secs) 260°C

INPUT DIODE

Forward Current _____ $\pm 50\text{mA}$
Power Dissipation _____ 70mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO} _____ 35V
Emitter-collector Voltage BV_{ECO} _____ 6V
Collector Current _____ 50mA
Power Dissipation _____ 150mW

POWER DISSIPATION

Total Power Dissipation _____ 200mW
(derate linearly 2.67mW/°C above 25°C)

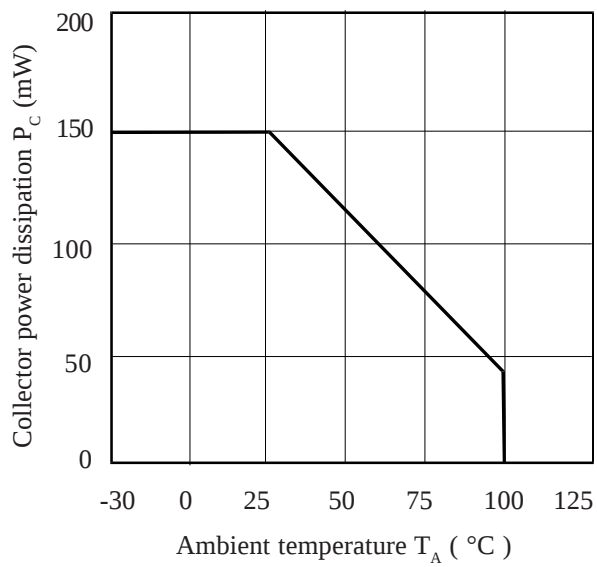
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.4	V	$I_F = \pm 20\text{mA}$
Output	Collector-emitter Breakdown (BV_{CEO}) (Note 2)	35			V	$I_C = 1\text{mA}$
	Emitter-collector Breakdown (BV_{ECO})	6			V	$I_E = 100\mu\text{A}$
	Collector-emitter Dark Current (I_{CEO})			100	nA	$V_{CE} = 20\text{V}$
Coupled	Current Transfer Ratio (CTR) (Note 2) ISP814, ISP824, ISP844	20		300	%	$\pm 1\text{mA} I_F, 5\text{V } V_{CE}$
	ISP814A, ISP824A, ISP844A	50		150	%	
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$			0.2	V	$\pm 20\text{mA} I_F, 1\text{mA} I_C$
	Input to Output Isolation Voltage V_{ISO}	5300 7500			V_{RMS} V_{PK}	See note 1 See note 1
	Input-output Isolation Resistance R_{ISO}	5×10^{10}			Ω	$V_{IO} = 500\text{V}$ (note 1)
	Output Rise Time t_r Output Fall Time t_f		4 3	18 18	μs μs	$V_{CE} = 2\text{V},$ $I_C = 2\text{mA}, R_L = 100\Omega$

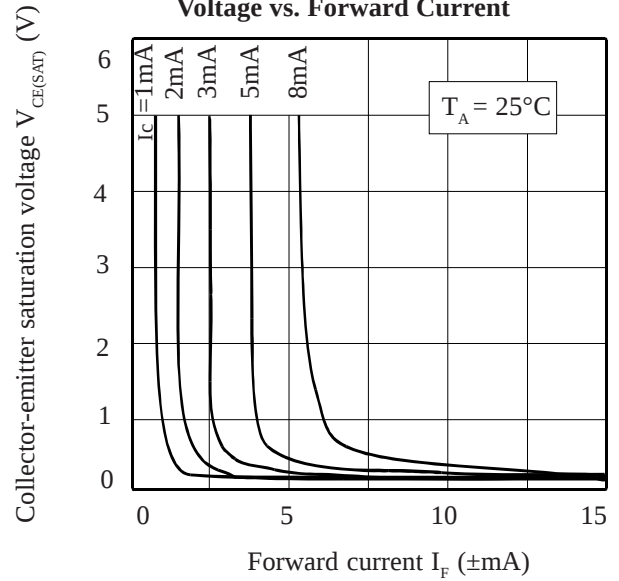
Note 1 Measured with input leads shorted together and output leads shorted together.

Note 2 Special Selections are available on request. Please consult the factory.

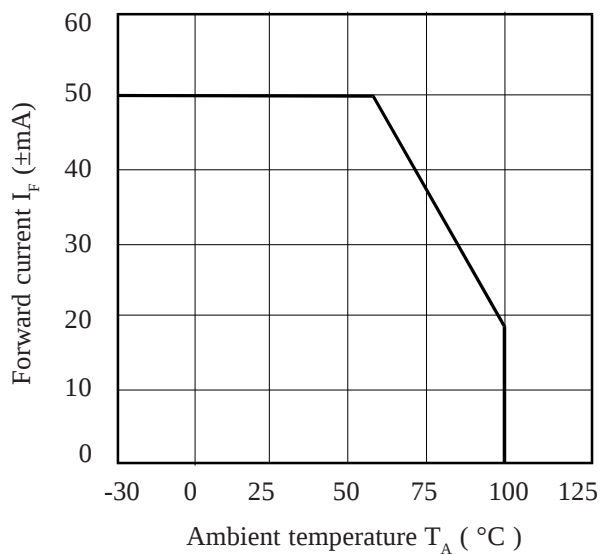
Collector Power Dissipation vs. Ambient Temperature



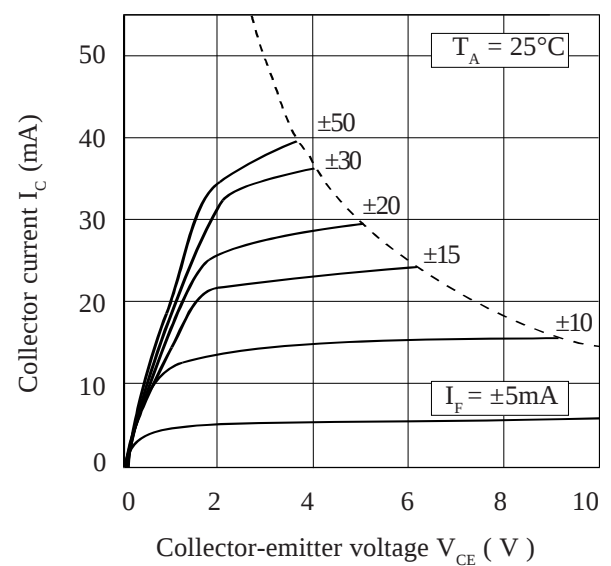
Collector-emitter Saturation Voltage vs. Forward Current



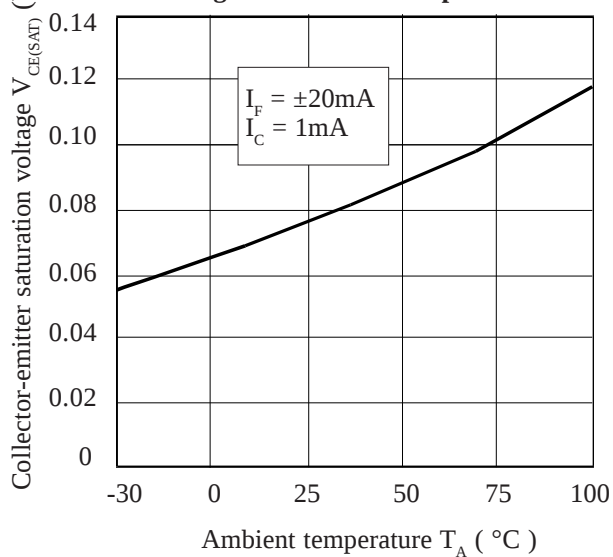
Forward Current vs. Ambient Temperature



Collector Current vs. Collector-emitter Voltage



Collector-emitter Saturation Voltage vs. Ambient Temperature



Current Transfer Ratio vs. Forward Current

