

ABSOLUTE MAXIMUM RATINGS
(25°C unless otherwise specified)

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

INPUT DIODE

Forward Current ——— ± 50mA
 Power Dissipation ——— 70mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO} ——— 70V
 Emitter-collector Voltage BV_{ECO} ——— 6V
 Power Dissipation ——— 150mW

POWER DISSIPATION

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

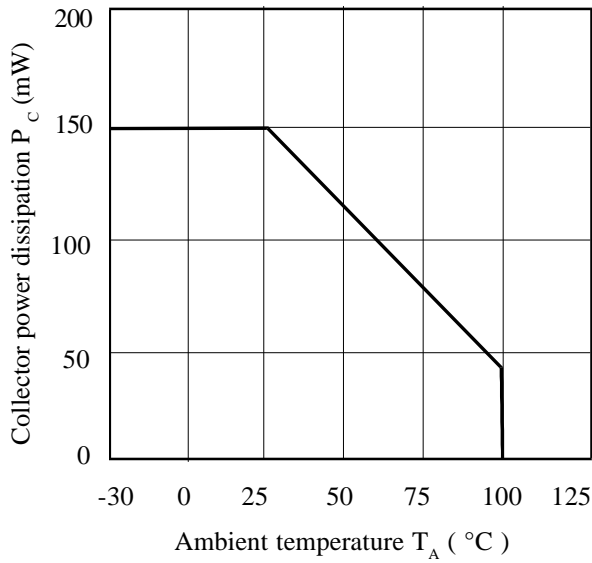
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

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)	70			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) ISP814-3, ISP824-3, ISP844-3	20			%	$\pm 0.25\text{mA } I_F, 0.4\text{V } V_{CE}$	
		40			%	$\pm 0.5\text{mA } I_F, 0.4\text{V } V_{CE}$	
		80			%	$\pm 1.0\text{mA } I_F, 0.4\text{V } V_{CE}$	
	ISP814-2, ISP824-2, ISP844-2	40			%	$\pm 0.5\text{mA } I_F, 0.4\text{V } V_{CE}$	
		80			%	$\pm 1.0\text{mA } I_F, 0.4\text{V } V_{CE}$	
	ISP814-1, ISP824-1, ISP844-1	80			%	$\pm 1.0\text{mA } I_F, 0.4\text{V } V_{CE}$	
		Collector-Emitter Saturation Voltage-3			0.4	V	$\pm 0.25\text{mA } I_F, 0.05\text{mA } I_C$
			-2			0.4	V
	-1			0.4	V	$\pm 1.0\text{mA } I_F, 0.8\text{mA } I_C$	
	Input to Output Isolation Voltage V_{ISO}	5300				V_{RMS}	See note 1
7500					V_{PK}	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		4	18		μs	$V_{CE} = 2\text{V}$,	
Output Fall Time t_f		3	18		μs	$I_C = 0.05\text{mA}, R_L = 100\Omega$	

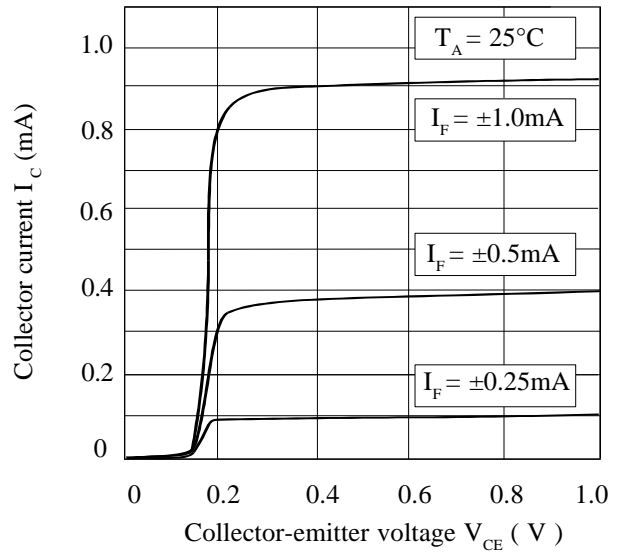
Note 1 Measured with input leads shorted together and output leads shorted together.

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

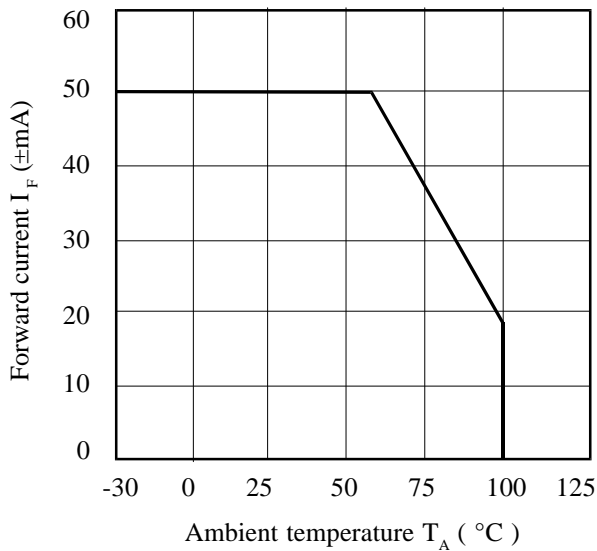
Collector Power Dissipation vs. Ambient Temperature



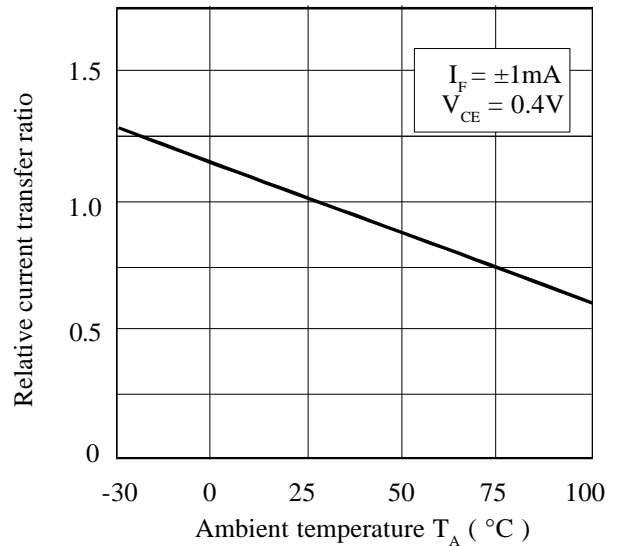
Collector Current vs. Low Collector-emitter Voltage



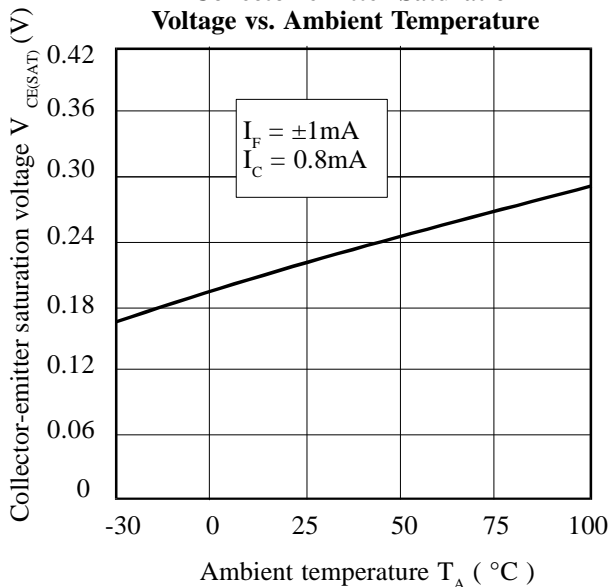
Forward Current vs. Ambient Temperature



Relative Current Transfer Ratio vs. Ambient Temperature



Collector-emitter Saturation Voltage vs. Ambient Temperature



Current Transfer Ratio vs. Forward Current

