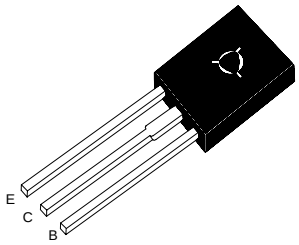
ST 2SD882T

NPN Silicon Power Transistor

The transistor is subdivided into four groups, R, Q, P and E, according to its DC current gain.



TO-126 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	I_C	3	A
Collector Current (pulse)	I_C(pulse)	7	A
Total power dissipation (T_a = 25 °C)	P_{tot}	1	W
Total power dissipation (T_c = 25 °C)	P_{tot}	10	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-55 to +150	°C

Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 2 V, I_C = 1 A						
Current Gain Group	R	h_{FE}	60	-	120	-
	Q	h_{FE}	100	-	200	-
	P	h_{FE}	160	-	320	-
	E	h_{FE}	200	-	400	-
at V_{CE} = 2 V, I_C = 20 mA		h_{FE}	30	-	-	-
Collector Cutoff Current at V_{CB} = 30 V		I_{CBO}	-	-	1	µA
Emitter Cutoff Current at V_{EB} = 3 V		I_{EBO}	-	-	1	µA
Output Capacitance V_{CB} = 10 V, f = 1 MHz		Cob	-	45	-	pF
Base Emitter Saturation Voltage at I_C = 2 A, I_B = 0.2 A		$V_{BE(sat)}$	-	-	2	V
Collector Emitter Saturation Voltage at I_C = 2 A, I_B = 0.2 A		$V_{CE(sat)}$	-	-	0.5	V
Gain Bandwidth Product at V_{CE} = 5 V, I_C = 0.1 A		f_T	-	90	-	MHz

SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

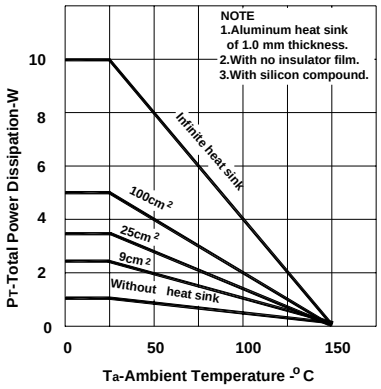
ISO/TS 16949 : 2002 Certificate No. 05103 ISO 14001:2004 Certificate No. 7116 ISO 9001:2000 Certificate No. 0506098

Dated : 22/03/2006

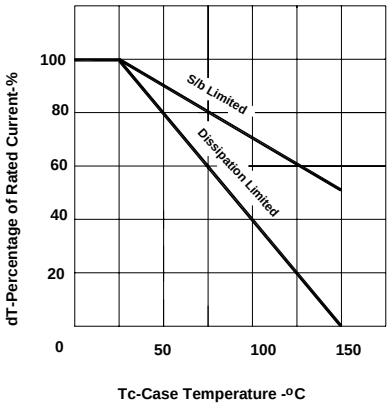
ST 2SD882T

TYPICAL CHARACTERISTICS (Ta=25°C)

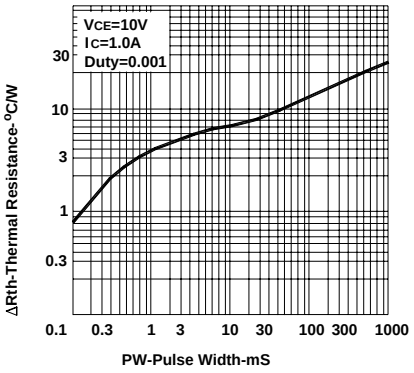
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



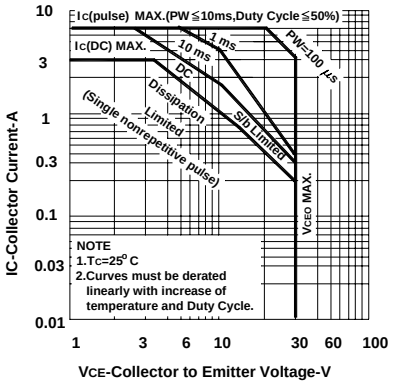
DERATING CURVES FOR ALL TYPES



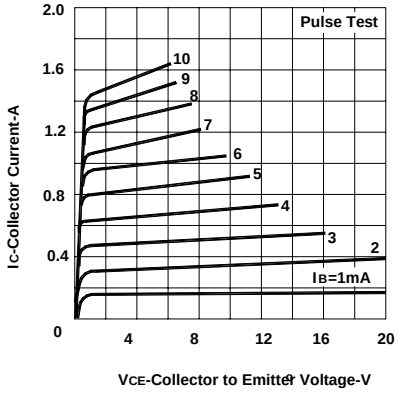
THERMAL RESISTANCE vs. PULSE WIDTH



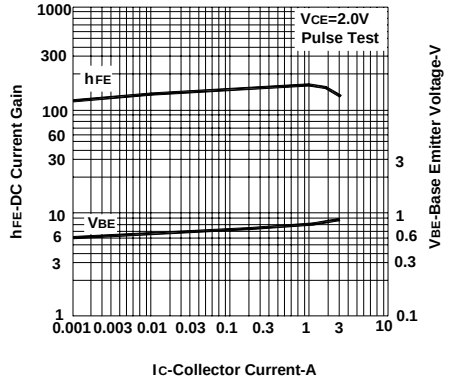
SAFE OPERATING AREAS



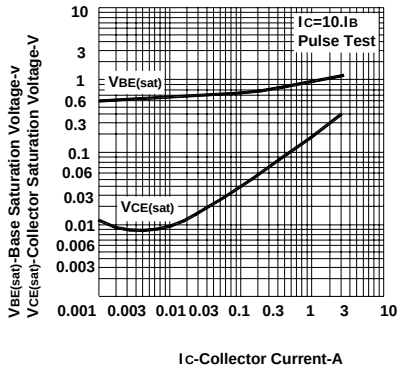
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



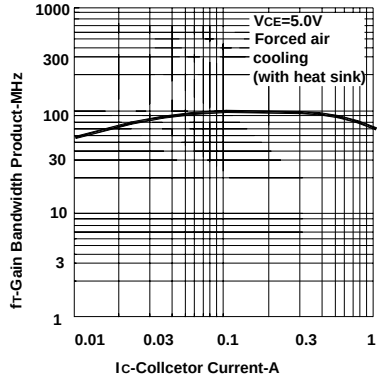
DC CURRENT GAIN, BASE TO EMITTER VOLTAGE vs. COLLECTOR CURRENT



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. COLLCETOR CURRENT



INPUT AND OUTPUT CAPACITANCE vs. REVERSE VOLTAGE