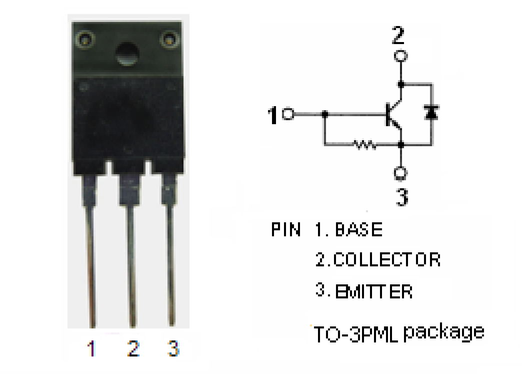
isc Silicon NPN Power Transistor 2SD1877



DESCRIPTION

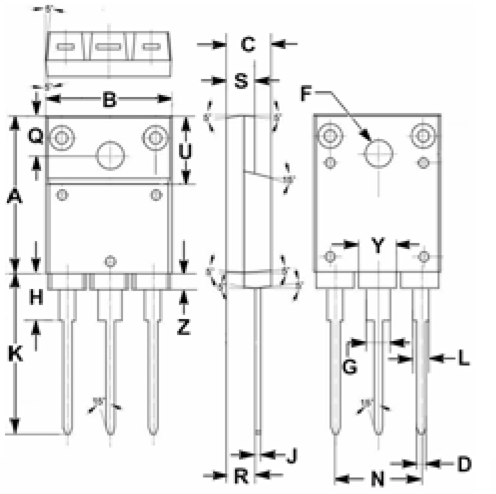
- High Breakdown Voltage-
  V_{CBO}= 1500V (Min)
- High Speed Switching
- High Reliability
- Built-in Damper Diode

APPLICATIONS

- Color TV horizontal deflection output
- Color display horizontal deflection output

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current- Continuous	4	A
I_{CP}	Collector Current-Pulse	12	A
P_C	Collector Power Dissipation @ T_C=25℃	50	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	19.90	20.10
B	15.90	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.10
H	5.90	6.10
J	0.595	0.605
K	22.30	22.50
L	1.90	2.10
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.40
U	9.90	10.10
Y	4.70	4.90
Z	1.90	2.10

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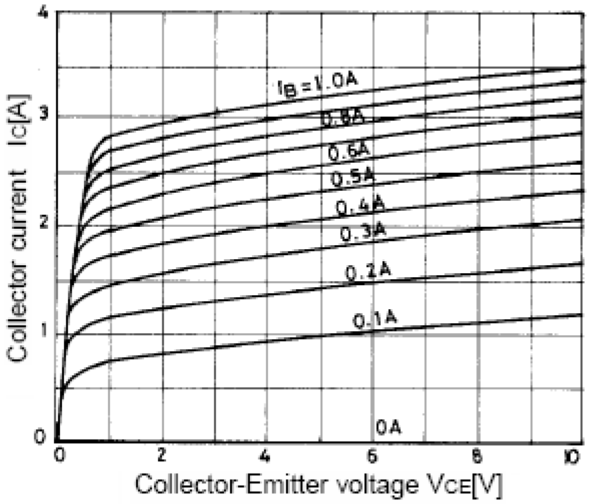
ELECTRICAL CHARACTERISTICS

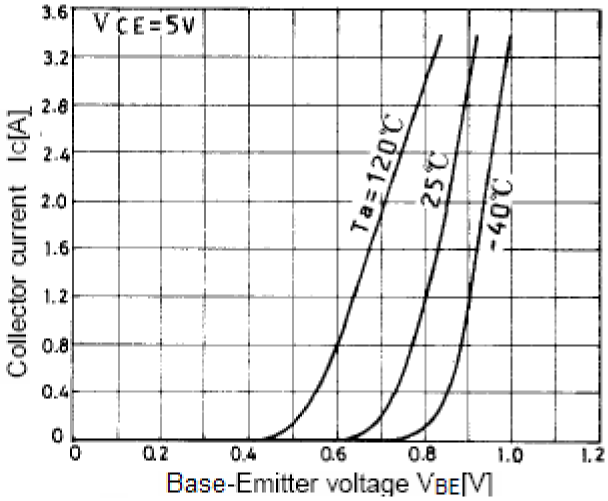
T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 100mA; I_B= 0	800			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.8A			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.8A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 800V ; I_E= 0			10	μA
I_{CES}	Collector Cutoff Current	V_{CE}= 1500V ; R_{BE}= 0			1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 4V ; I_C= 0	40		130	mA
h_{FE-1}	DC Current Gain	I_C= 0.5A ; V_{CE}= 5V	8			
h_{FE-2}	DC Current Gain	I_C= 2.5A ; V_{CE}= 5V	3.5		7	
V_{ECF}	C-E Diode Forward Voltage	I_F= 4A			2.0	V
t_f	Fall Time	I_C= 3A , I_{B1}= 0.8A ; I_{B2}= -1.6A			0.3	μs

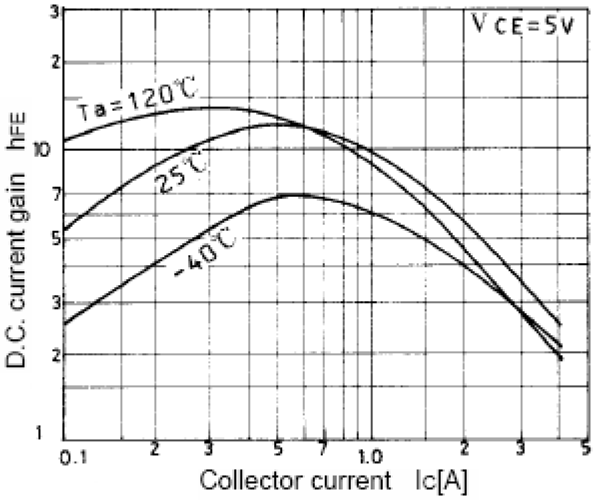
Ic−VCE Characteristics



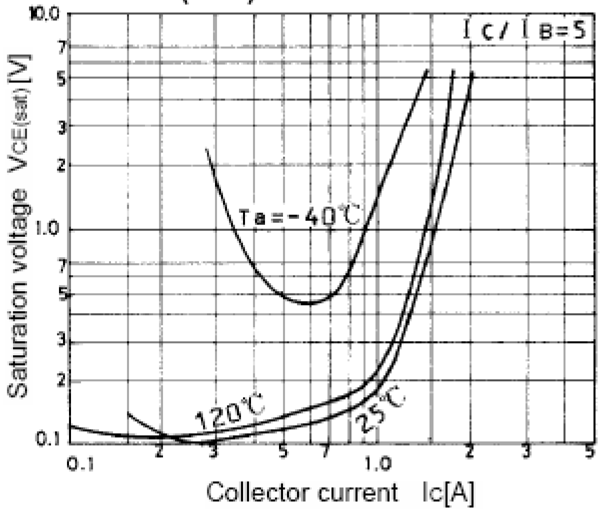
Ic−VBE Characteristics



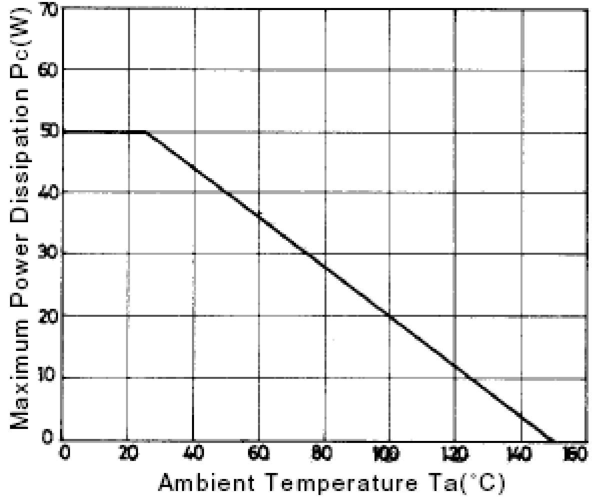
hFE−Ic Characteristics



VCE(sat)−Ic Characteristics



Power Derating



Safe Operating Area