

NPN SILICON POWER TRANSISTORS

...specifically designed for use in horizontal deflection output for B/W TV applications

FEATURES:

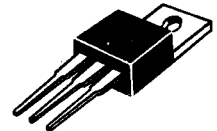
- * Low Collector-Emitter Saturation Voltage
 $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 5.0A, I_B = 0.5A$
- * Fast Switching Time-
 $t_f = 1.0 \mu s (\text{Max}) @ I_C = 5A, I_B = 0.6A$

NPN
2SC2373

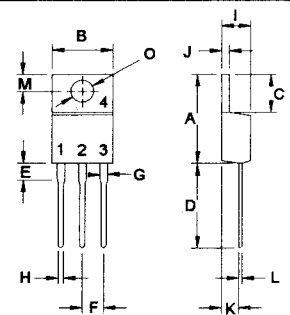
7.5 AMPERE
SILICON POWER
TRANSISTORS
100 VOLTS
40 WATTS

MAXIMUM RATINGS

Characteristic	Symbol	2SC2373	Unit
Collector-Emitter Voltage	V_{CEO}	100	V
Collector-Base Voltage	V_{CBO}	200	V
Emitter-Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous - Peak	I_C I_{CM}	7.5 15	A
Base current	I_B	3.0	A
Total Power Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	40 0.32	W W/ $^\circ C$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$



TO-220



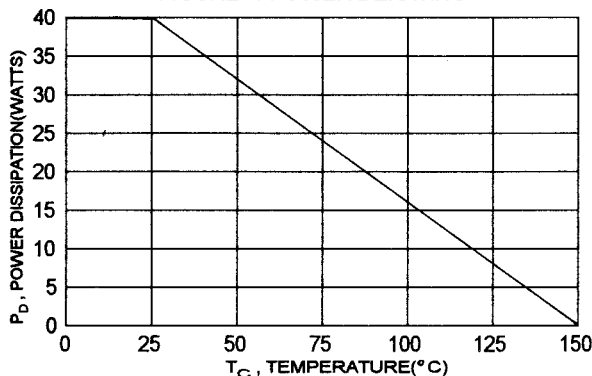
PIN 1.BASE
2.COLLECTOR
3.EMITTER
4.COLLECTOR(CASE)

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	3.125	$^\circ C/W$

DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.31
B	9.78	10.42
C	5.01	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	3.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.38
K	2.20	2.97
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90

FIGURE -1 POWER DERATING



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

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Voltage ($I_c = 30\text{ mA}$, $I_B = 0$)	V_{CE0}	100		V
Emitter-Base Voltage ($I_B = 1.0\text{ mA}$, $I_c = 0$)	V_{EBO}	7.0		V
Collector Cutoff Current ($V_{CB} = 150\text{ V}$, $I_E = 0$)	I_{CBO}		10	μA
Emitter Cutoff Current ($V_{EB} = 5.0\text{ V}$, $I_c = 0$)	I_{EBO}		10	μA

ON CHARACTERISTICS (1)

DC Current Gain ($I_c = 5.0\text{ A}$, $V_{CE} = 5.0\text{ V}$) *	$h_{FE(2)}$	15	70	
Collector-Emitter Saturation Voltage ($I_c = 5.0\text{ A}$, $I_B = 500\text{ mA}$)	$V_{CE(sat)}$		1.5	V
Base-Emitter Saturation Voltage ($I_c = 5.0\text{ A}$, $I_B = 500\text{ mA}$)	$V_{BE(sat)}$		1.5	V

DYNAMIC CHARACTERISTICS

Current-Gain-Bandwidth Product ($I_c = 0.1\text{ A}$, $V_{CE} = 5.0\text{ V}$, $f = 3.0\text{ MHz}$)	f_T	5.0		MHz
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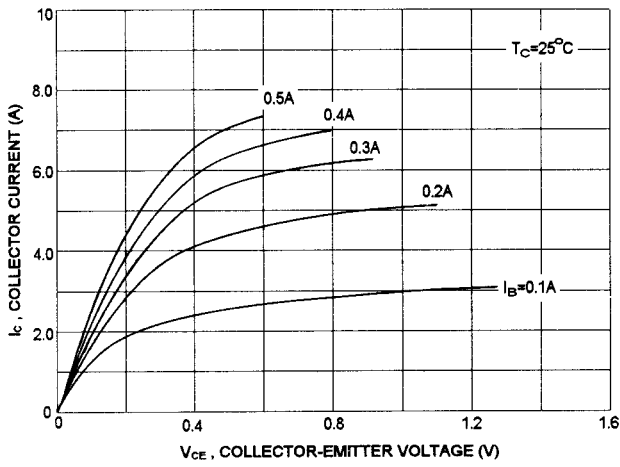
SWITCHING CHARACTERISTICS

Turn-on Time	$V_{CC} = 20\text{ V}$, $I_c = 5.0\text{ A}$ $I_{B1} = -I_{B2} = 600\text{ mA}$ $PW = 20\text{ us}$	t_{on}	1.0	μs
Storage Time		t_s	2.5	μs
Fall Time		t_f	1.0	μs

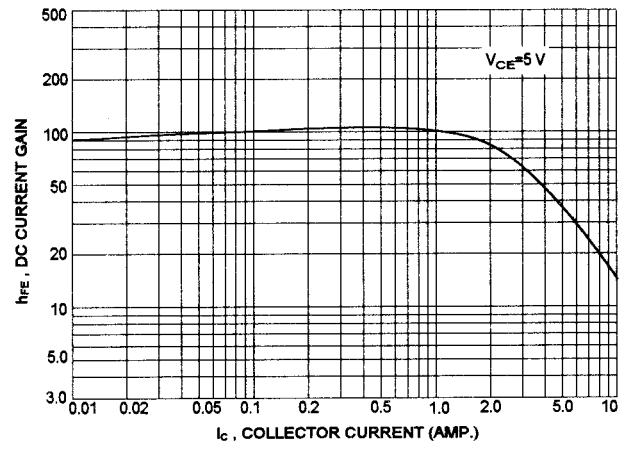
(1) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$ * $h_{FE(2)}$ Classification :

15	M	35	25	L	45	35	K	70
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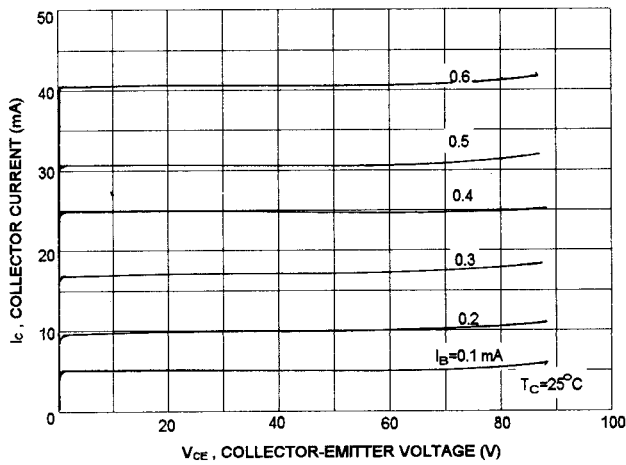
$I_c - V_{ce}$



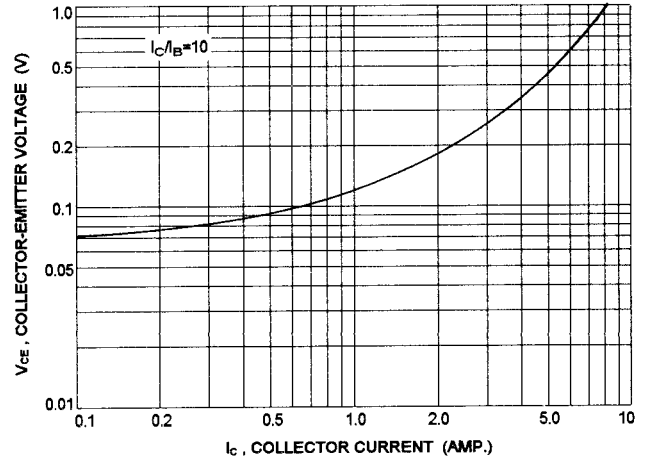
DC CURRENT GAIN



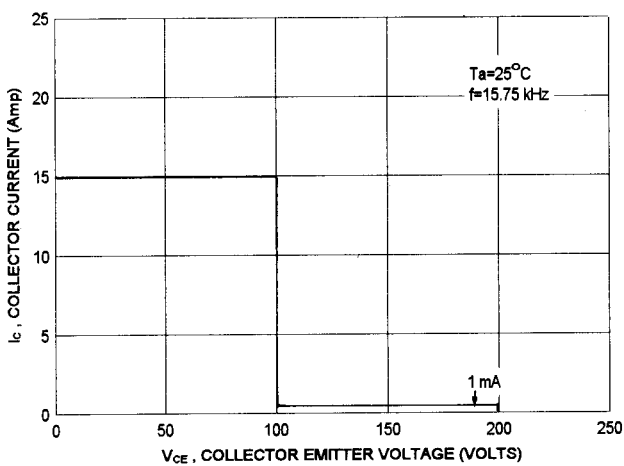
$I_c - V_{ce}$



$V_{ce} - I_c$



SAFE OPERATING AREA



$V_{BE} - I_c$

