

## NPN SILICON POWER TRANSISTORS

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

### FEATURES:

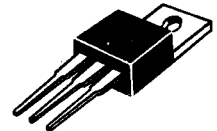
- \* Low Collector-Emitter Saturation Voltage  
 $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 5.0A, I_B = 0.5A$
- \* Fast Switching Time-  
 $t_f = 1.0 \mu s (\text{Max}) @ I_C = 5A, I_B = 0.6A$

**NPN**  
**2SC2373**

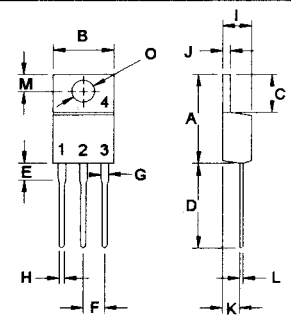
**7.5 AMPERE**  
**SILICON POWER**  
**TRANSISTORS**  
**100 VOLTS**  
**40 WATTS**

### 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**



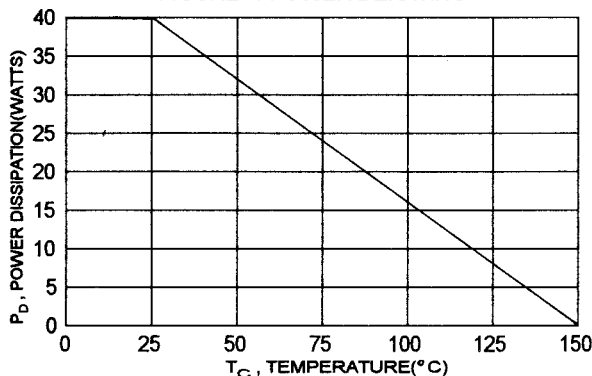
PIN 1.BASE  
2.COLLECTOR  
3.EMITTER  
4.COLLECTOR(CASE)

### 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	$\mu\text{A}$
Emitter Cutoff Current ( $V_{EB} = 5.0\text{ V}$ , $I_c = 0$ )	$I_{EBO}$		10	$\mu\text{A}$

## 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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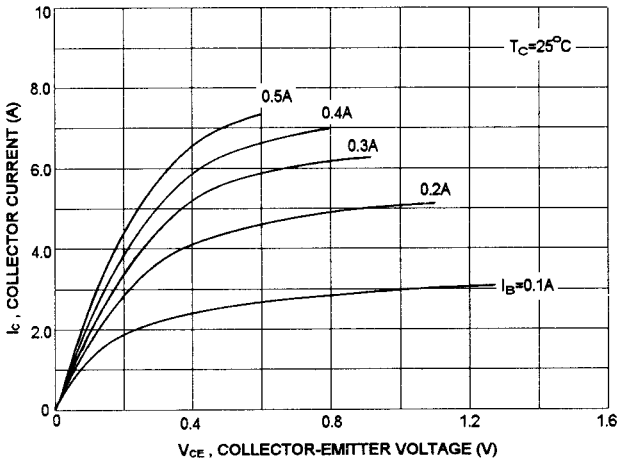
## SWITCHING CHARACTERISTICS

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

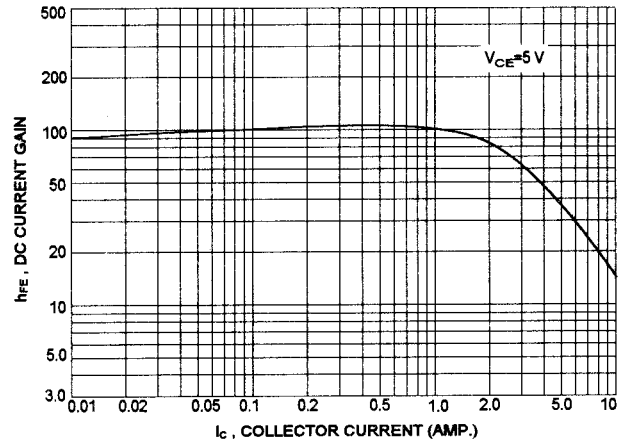
(1) Pulse Test: Pulse Width = 300  $\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ \*  $h_{FE(2)}$  Classification :

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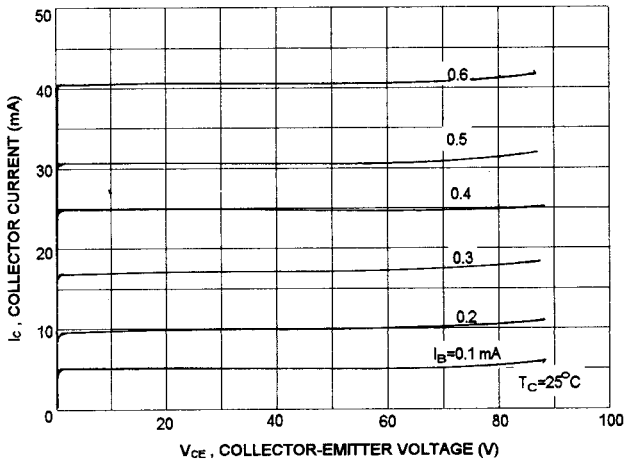
$I_c - V_{ce}$



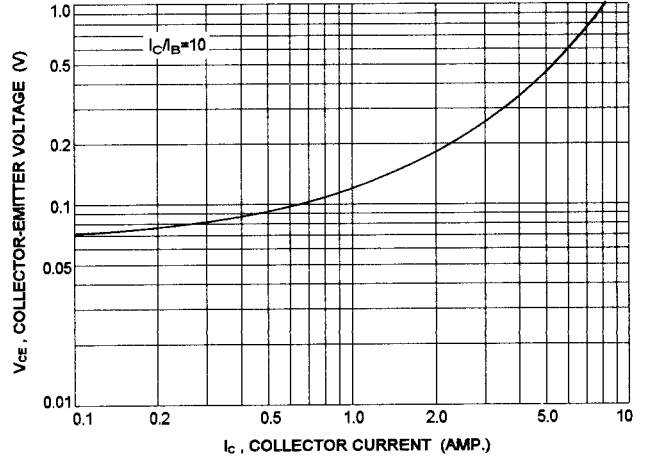
DC CURRENT GAIN



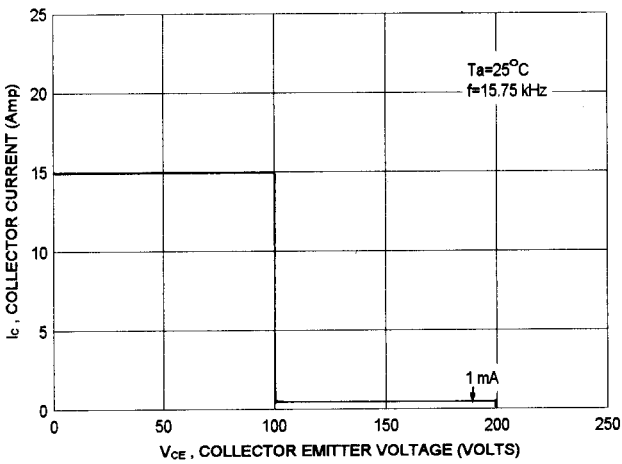
$I_c - V_{ce}$



$V_{ce} - I_c$



SAFE OPERATING AREA



$V_{BE} - I_c$

