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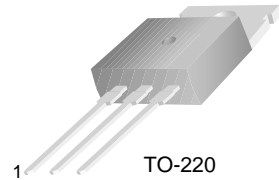
September 2011

# KSC2073

## NPN Epitaxial Silicon Transistor

### Features

- TV Vertical Deflection Output
- Complement to KSA940
- Collector-Base Voltage :  $V_{CBO} = 150V$



TO-220  
1.Base 2.Collector 3.Emmitter

### Absolute Maximum Ratings $T_A = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	150	V
$V_{CEO}$	Collector-Emitter Voltage	150	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	1.5	A
$P_C$	Collector Dissipation ( $T_C = 25^\circ C$ )	25	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	- 55 to 150	$^\circ C$

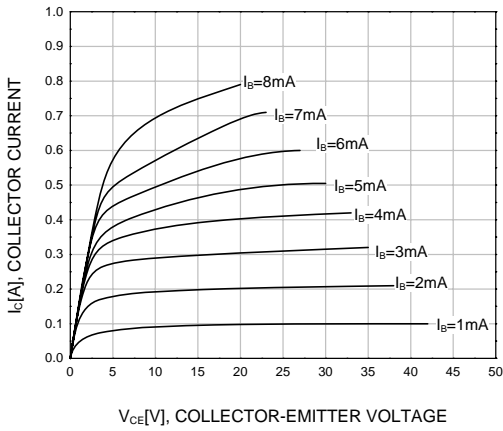
### Electrical Characteristics $T_A = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = 500\mu A, I_E = 0$	150			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10mA, I_B = 0$	150			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 500\mu A, I_C = 0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 120V, I_E = 0$			10	$\mu A$
$h_{FE}$	DC Current Gain	$V_{CE} = 10V, I_C = 0.5A$	40	75	140	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 500mA, I_B = 50mA$			1	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = 10V, I_C = 0.5A$		4		MHz
$C_{ob}$	Output Capacitance	$V_{CB} = 10V, I_E = 0, f = 1MHz$		50		pF

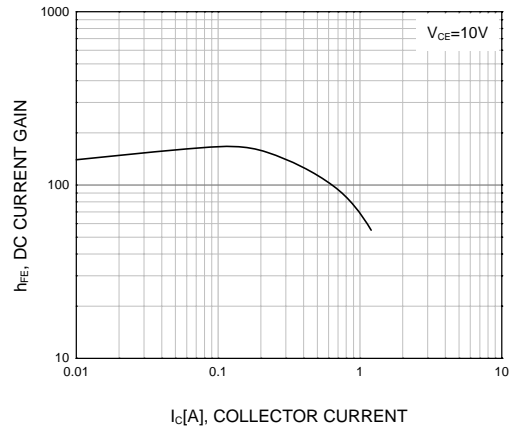
### $h_{FE}$ Classification

Classification	H1	H2
$h_{FE}$	40 ~ 80	60 ~ 125

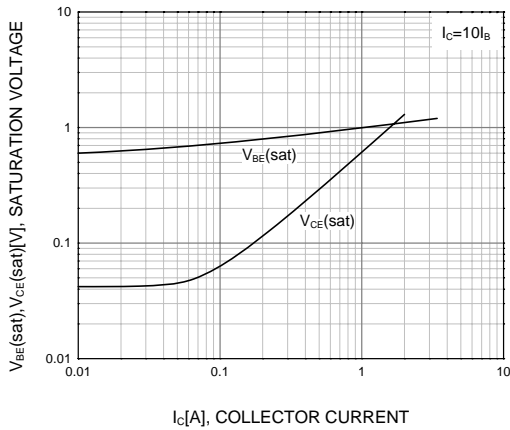
## Typical Performance Characteristics



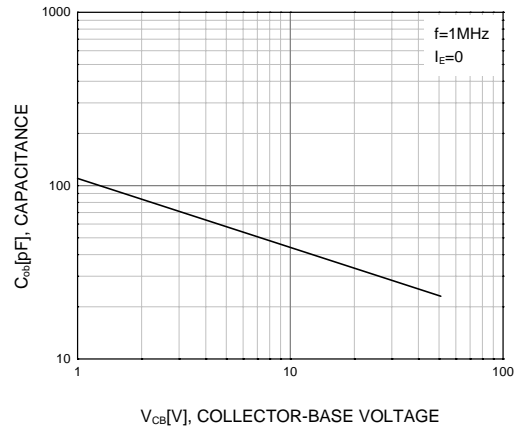
**Figure 1. Static Characteristic**



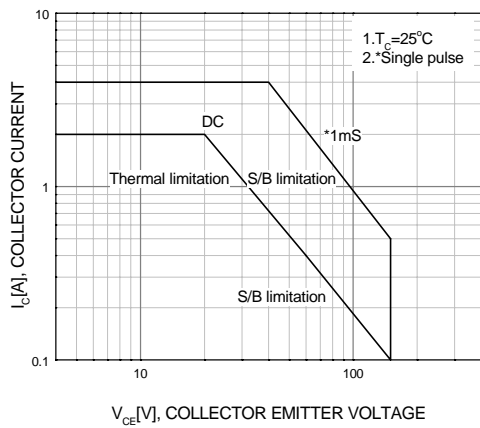
**Figure 2. DC current Gain**



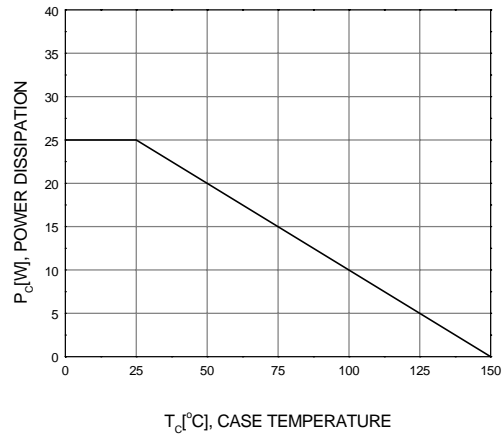
**Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**



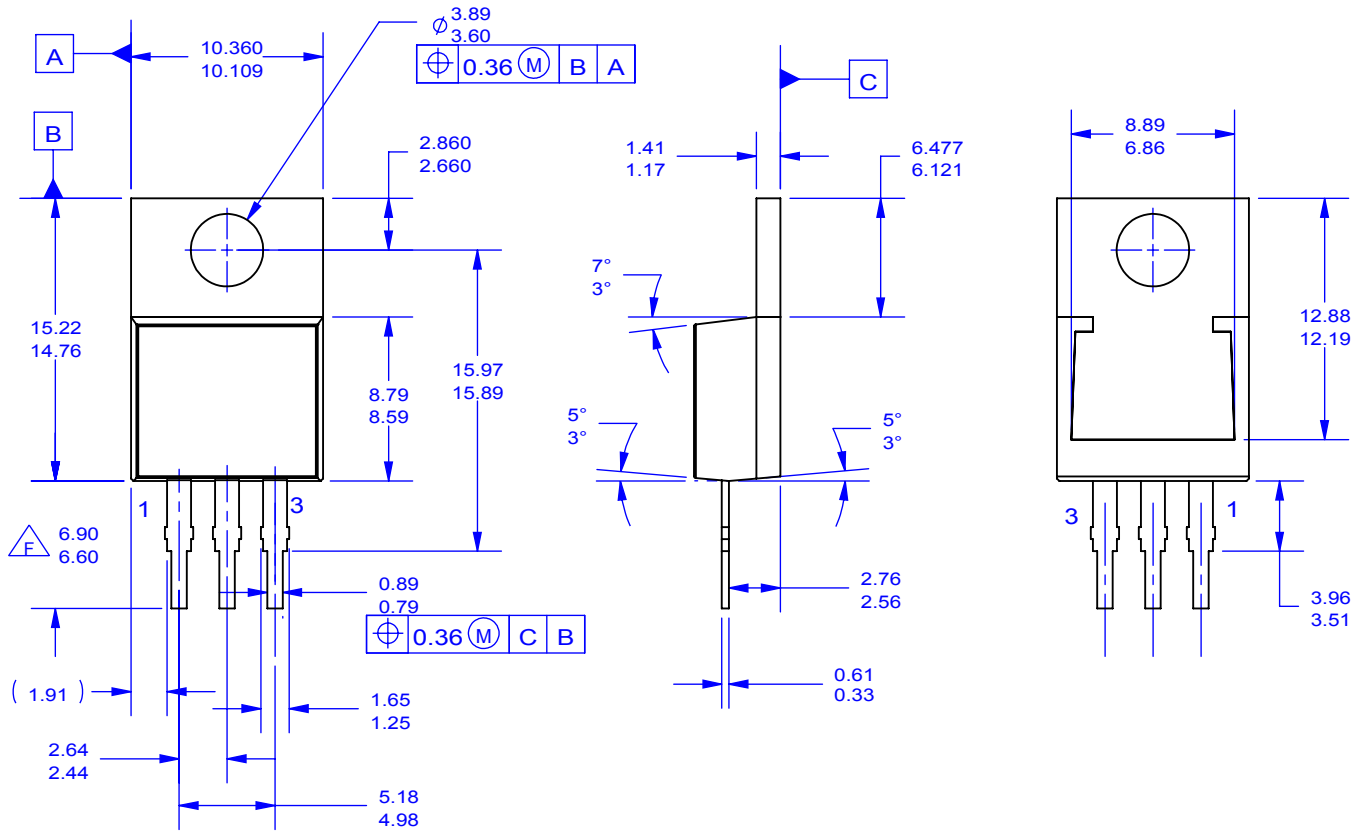
**Figure 4. Collector-Emitter On Voltage**



**Figure 5. Safe Operating Area**

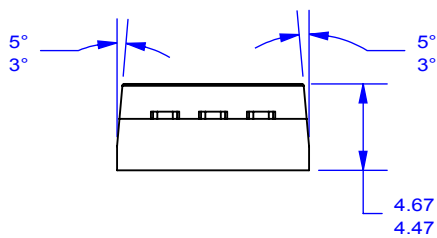


**Figure 6. Power Derating**



NOTES:

- A. PACKAGE REFERENCE: JEDEC TO220 VARIATION AB
- B. ALL DIMENSIONS ARE IN MILLIMETERS.
- C. DIMENSION AND TOLERANCE AS PER ASME Y14.5-1994.
- D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
- E. FAIRCHILD SEMICONDUCTOR.
- $\Delta$  F DOES NOT COMPLY JEDEC STD VALUE.
- G. DRAWING FILE NAME: TO220U03REV1





- NOTES:
- A) REFERENCE JEDEC, TO-220, VARIATION AB
  - B) ALL DIMENSIONS ARE IN MILLIMETERS.
  - C) DIMENSIONS COMMON TO ALL PACKAGE SUPPLIERS EXCEPT WHERE NOTED [ ].
  - D) LOCATION OF MOLDED FEATURE MAY VARY (LOWER LEFT CORNER, LOWER CENTER AND CENTER OF THE PACKAGE)
  - E) DOES NOT COMPLY JEDEC STANDARD VALUE.
  - F) "A1" DIMENSIONS AS BELOW:  
 SINGLE GAUGE = 0.51 - 0.61  
 DUAL GAUGE = 1.10 - 1.45
  - G) DRAWING FILE NAME: TO220B03REV9
  - H) PRESENCE IS SUPPLIER DEPENDENT
  - I) SUPPLIER DEPENDENT MOLD LOCKING HOLES IN HEATSINK.

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