

# NPN Epitaxial Silicon Transistor

## KSC2073

### Features

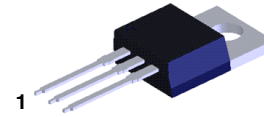
- TV Vertical Deflection Output
- Complement to KSA940
- Collector–Base Voltage :  $V_{CBO} = 150\text{ V}$
- These Devices are Pb–Free and Halide Free

### ABSOLUTE MAXIMUM RATINGS

( $T_A = 25^\circ\text{C}$  unless otherwise noted.)

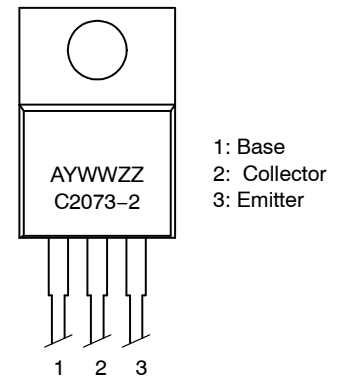
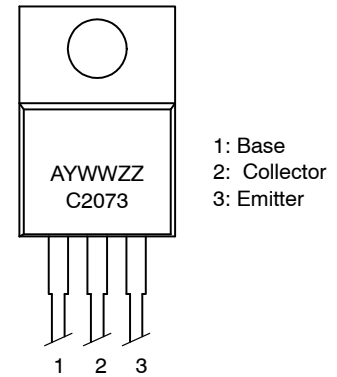
Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector–Base Voltage	150	V
$V_{CEO}$	Collector–Emitter Voltage	150	V
$V_{EBO}$	Emitter–Base Voltage	5	V
$I_C$	Collector Current	1.5	A
$P_C$	Collector Dissipation ( $T_C=25^\circ\text{C}$ )	25	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature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

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



TO-220-3LD  
CASE 340AT

### MARKING DIAGRAMS



A = Assembly Plant Code  
 YWW = 3-Digit Date Code  
 (Year and Week)  
 ZZ = 2-Digit Lot Code  
 C2073, C2073-2 = Specific Device Code

### ORDERING INFORMATION

See detailed ordering, marking and shipping information on page 2 of this data sheet.

NOTE: Some of the devices on this data sheet have been **DISCONTINUED**. Please refer to the table on page 2.

# KSC2073

## ELECTRICAL CHARACTERISTICS

(T<sub>A</sub> = 25°C unless otherwise noted.)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV <sub>CBO</sub>	Collector–Base Breakdown Voltage	I <sub>C</sub> = 500 μA, I <sub>E</sub> = 0	150	–	–	V
BV <sub>CEO</sub>	Collector–Emitter Breakdown Voltage	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 0	150	–	–	V
BV <sub>EBO</sub>	Emitter–Base Breakdown Voltage	I <sub>E</sub> = 500 μA, I <sub>C</sub> = 0	5	–	–	V
I <sub>CBO</sub>	Collector Cut–Off Current	V <sub>CB</sub> = 120 V, I <sub>E</sub> = 0	–	–	10	μA
h <sub>FE</sub>	DC Current Gain	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 0.5 A	40	75	140	
V <sub>CE(sat)</sub>	Collector–Emitter Saturation Voltage	I <sub>C</sub> = 500 mA, I <sub>B</sub> = 50 mA	–	–	1	V
f <sub>T</sub>	Current Gain Bandwidth Product	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 0.5 A	–	4	–	MHz
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	–	50	–	pF

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

## h<sub>FE</sub> CLASSIFICATION

Classification	H1	H2
h <sub>FE</sub>	40 ~ 80	60 ~ 125

## ORDERING INFORMATION

Device	Package	Marking	Shipping
KSC2073TU	TO–220–3LD (Pb–Free)	C2073	1000 Units / Tube

## DISCONTINUED (Note 1)

KSC2073H2TU	TO–220–3LD (Pb–Free)	C2073–2	1000 Units / Tube
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1. **DISCONTINUED:** This device is not recommended for new design. Please contact your **onsemi** representative for information. The most current information on this device may be available on [www.onsemi.com](http://www.onsemi.com).

## TYPICAL PERFORMANCE CHARACTERISTICS

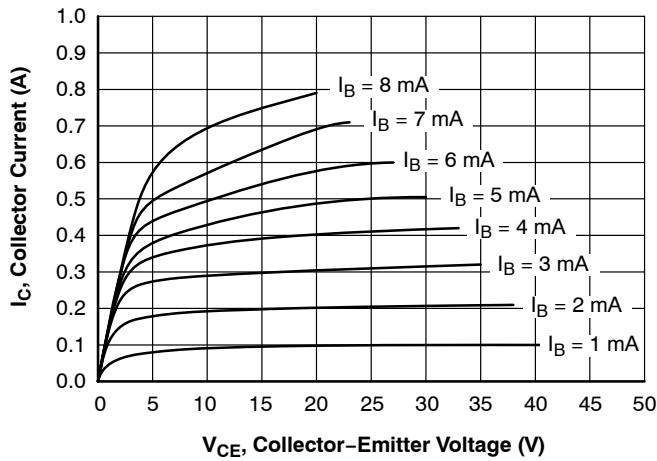


Figure 1. Static Characteristic

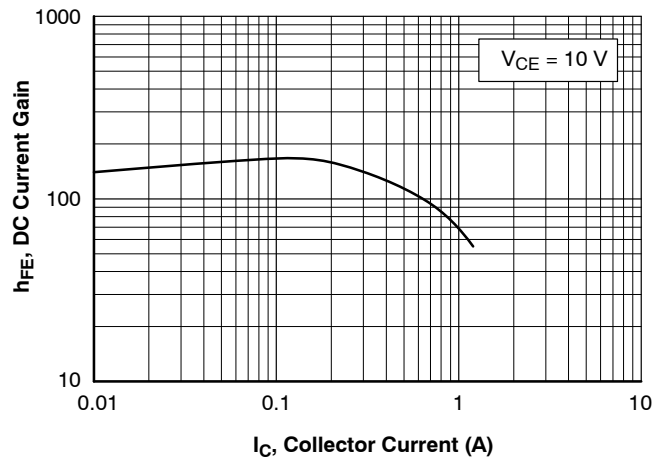


Figure 2. DC Current Gain

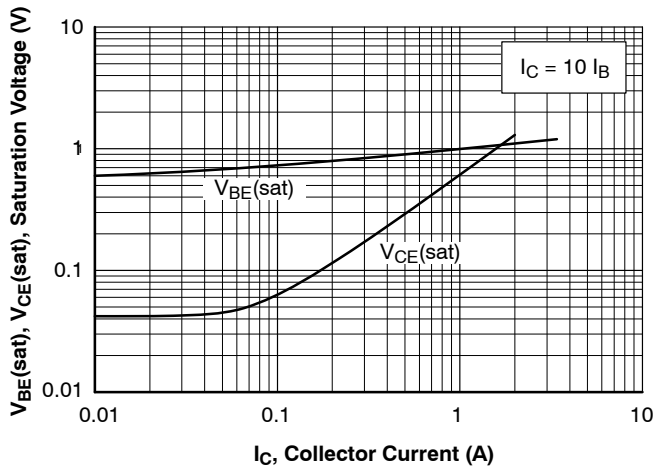
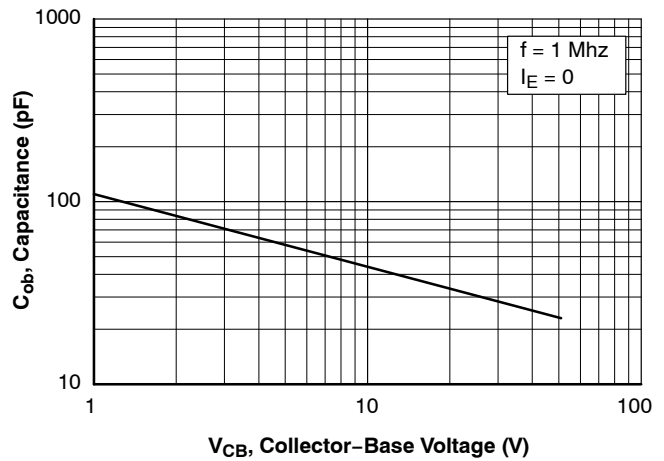
Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

Figure 4. Collector-Base On Voltage

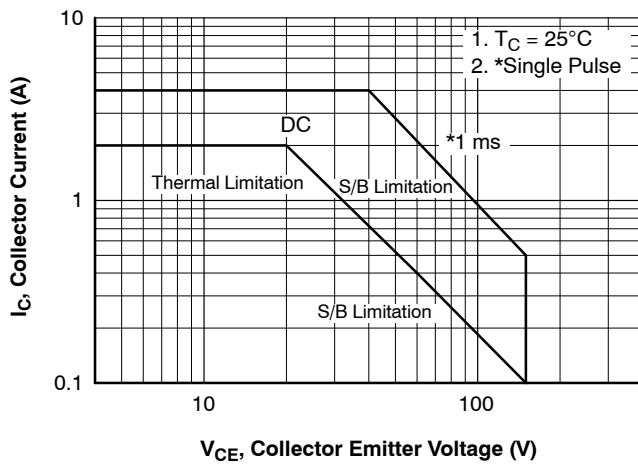


Figure 5. Safe Operating Area

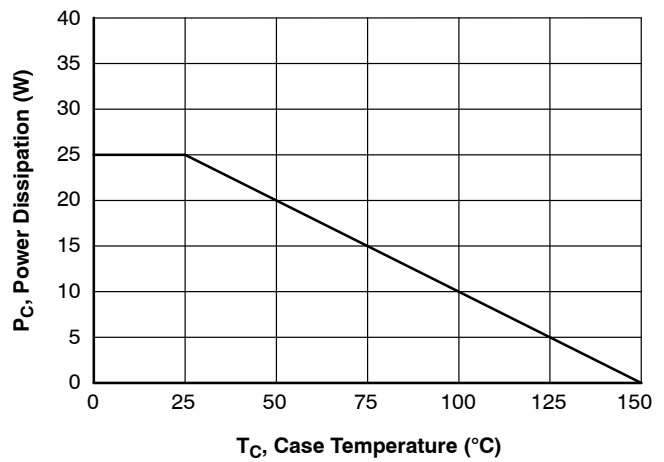
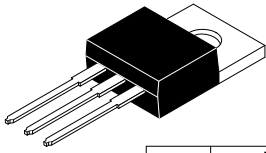


Figure 6. Power Derating



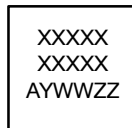
TO-220-3LD  
CASE 340AT  
ISSUE B

DATE 08 AUG 2022

DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	4.00	--	4.70
A1	SEE NOTE "F"		
A2	2.10	--	2.85
b	0.55	--	1.00
b2	1.10	--	1.62
b4	1.42	--	1.62
c	0.36	--	0.60
D	13.90	--	16.30
D1	8.13	--	9.40
D2	11.50	--	14.30
D3	15.42	--	16.51
E	9.65	--	10.67
E1	7.59	--	8.65
e	2.40	--	2.67
H1	6.06	--	6.69
L	12.70	--	14.04
L1	2.70	--	4.10
P	3.50	--	4.00
Q	2.50	--	3.40
z	2.13 REF		
z1	2.06 REF		
θ	3°	--	5°

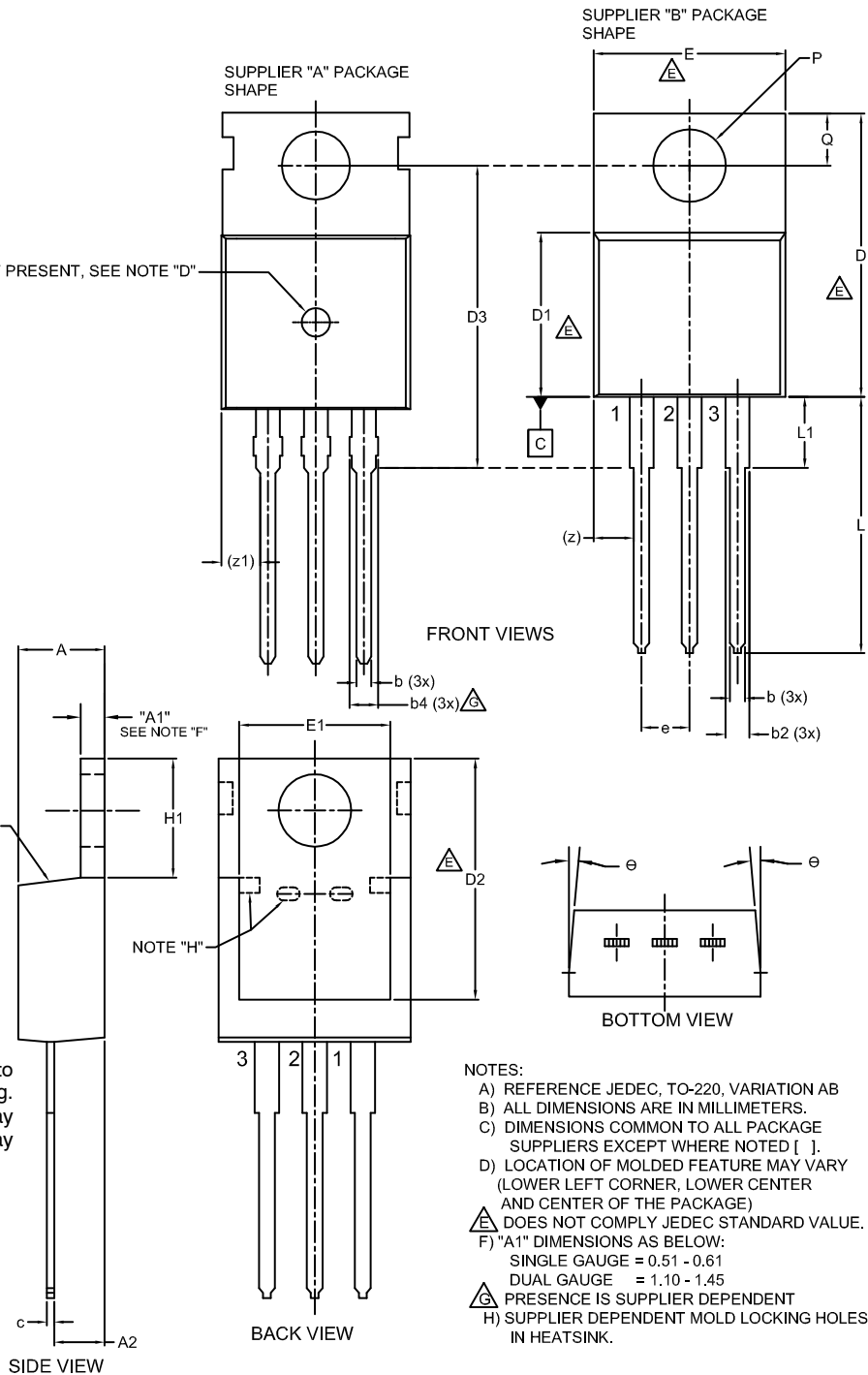
IF PRESENT, SEE NOTE "D"

GENERIC  
MARKING DIAGRAM\*



XXXX = Specific Device Code  
A = Assembly Location  
Y = Year  
WW = Work Week  
ZZ = Assembly Lot Code

\*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.



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) PRESENCE IS SUPPLIER DEPENDENT
- H) SUPPLIER DEPENDENT MOLD LOCKING HOLES IN HEATSINK.

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