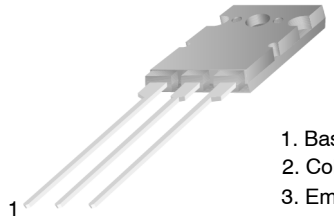
NPN Triple Diffused Planar Silicon Transistor

FJL6920



1. Base
2. Collector
3. Emitter

TO−264−3LD
CASE 340CA

Features

- High Collector−Base Breakdown Voltage: BV_{CBO} = 1700 V
- Low Saturation Voltage: $V_{CE}(sat)$ = 3 V (Max.)
- For Color Monitor
- These Devices are Pb−Free, Halide Free and are RoHS Compliant

Applications

- High Voltage Color Display Horizontal Deflection Output

ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

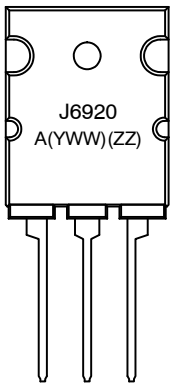
Parameter	Symbol	Rating	Units
Collector−Base Voltage	V_{CBO}	1700	V
Collector−Emitter Voltage	V_{CEO}	800	V
Emitter−Base Voltage	V_{EBO}	6	V
Collector Current (DC)	I_C	20	A
Collector Current (Pulse) *	I_{CP}	30	A
Collector Dissipation	P_C	200	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_J, T_{STG}	−55 ~ 150	°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.
*Pulse Test: PW = 300 μs, Duty Cycle = 2% Pulsed

THERMAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Parameter	Symbol	Max.	Units
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.625	°C/W

MARKING DIAGRAM



J6920	= Specific Device Code
A	= Assembly Site
Y	= Year of Production, Last Number
WW	= Work Week Number
ZZ	= Assembly Lot Number, Last Two Numbers

ORDERING INFORMATION

Device	Package	Shipping
FJL6920TU	TO−264−3LD	375 Units / Tube

ELECTRICAL CHARACTERISTICS (Note 1) (T_C = 25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
I_{CES}	Collector Cut−Off Current	V_{CB} = 1400 V, R_{BE} = 0			1	mA
I_{CBO}	Collector Cut−Off Current	V_{CB} = 800 V, I_E = 0			10	μA
I_{EBO}	Emitter Cut−Off Current	V_{EB} = 4 V, I_C = 0			1	mA
BV_{CBO}	Collector−Base Breakdown Voltage	I_C = 500 μA, I_E = 0	1700			V
BV_{CEO}	Collector−Emitter Breakdown Voltage	I_C = 5 mA, I_B = 0	800			V
BV_{EBO}	Emitter−Base Breakdown Voltage	I_E = 500 μA, I_C = 0	6			V
h_{FE1}	DC Current Gain	V_{CE} = 5 V, I_C = 1 A	8			
h_{FE2}	DC Current Gain	V_{CE} = 5 V, I_C = 11 A	5.5		8.5	
V_{CE}(sat)	Collector−Emitter Saturation Voltage	I_C = 11 A, I_B = 2.75 A			3	V
V_{BE}(sat)	Base−Emitter Saturation Voltage	I_C = 11 A, I_B = 2.75 A			1.5	V
t_{STG}	Storage Time (Note 1)	V_{CC} = 200 V, I_C = 10 A, R_L = 20 Ω, I_{B1} = 2.0 A, I_{B2} = −4.0 A			3	μs
t_F	Fall Time (Note 1)	V_{CC} = 200 V, I_C = 10 A, R_L = 20 Ω, I_{B1} = 2.0 A, I_{B2} = −4.0 A		0.15	0.2	μs

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.

1. Pulse Test: PW = 20 μs, Duty Cycle = 1% Pulsed

TYPICAL CHARACTERISTICS

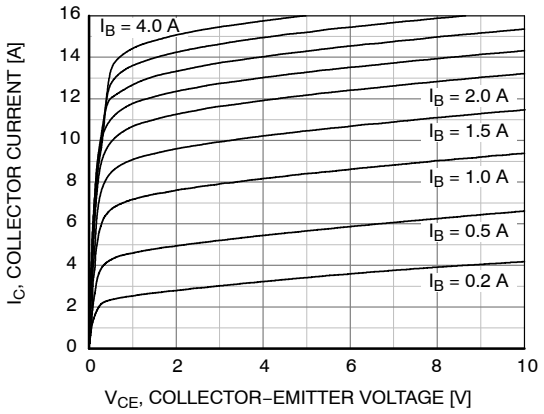


Figure 1. Static Characteristic

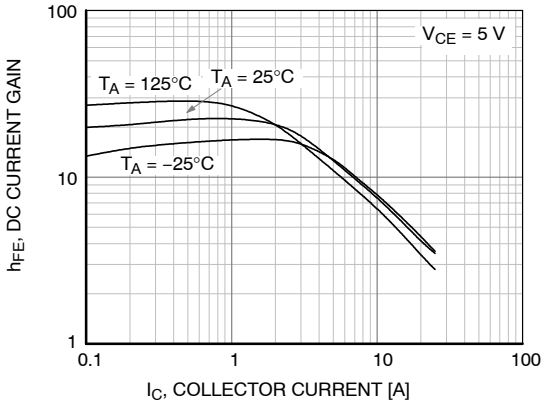


Figure 2. DC Current Gain

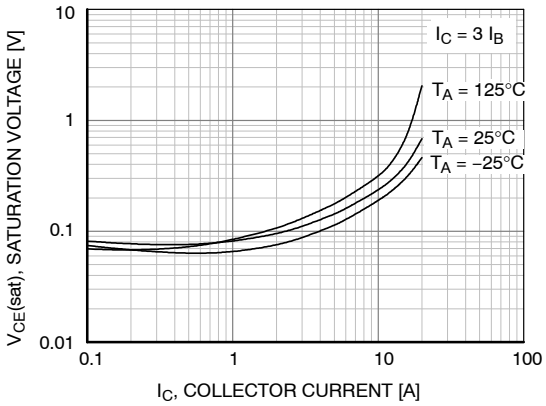


Figure 3. Collector−Emitter Saturation Voltage

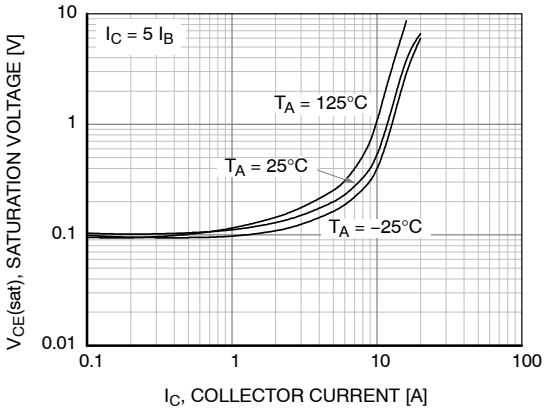


Figure 4. Collector−Emitter Saturation Voltage

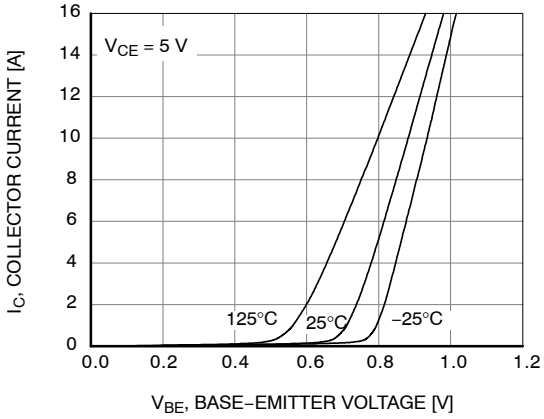


Figure 5. Base−Emitter On Voltage

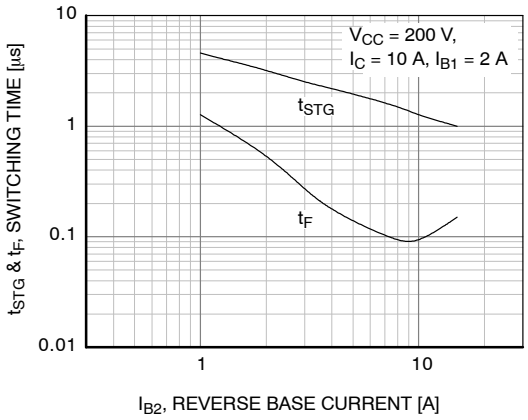


Figure 6. Resistive Load Switching Time

TYPICAL CHARACTERISTICS (Continued)

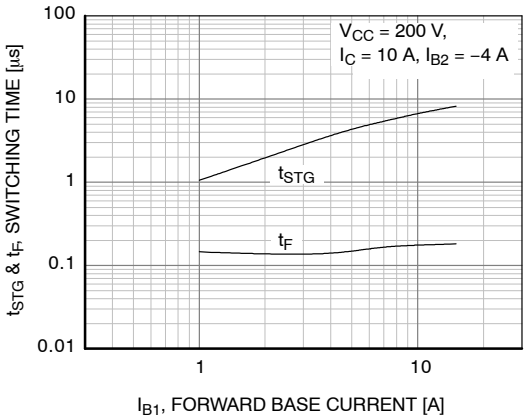


Figure 7. Resistive Load Switching Time

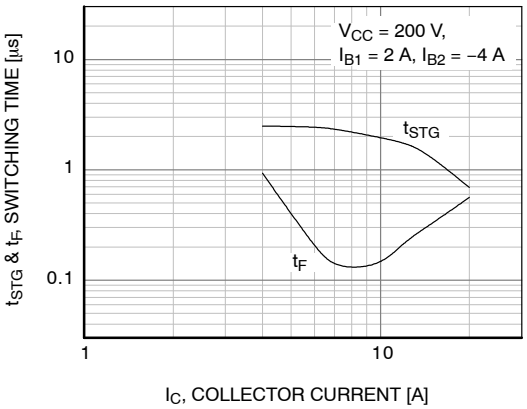


Figure 8. Resistive Load Switching Time

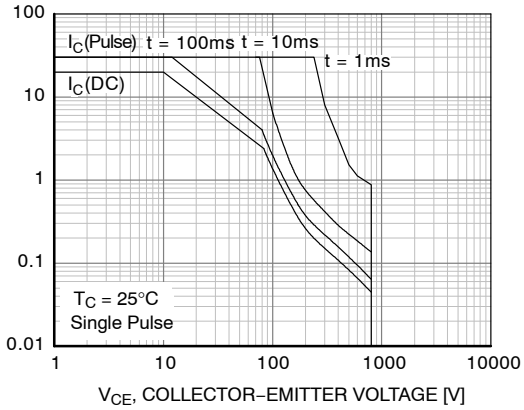


Figure 9. Forward Bias Safe Operating Area

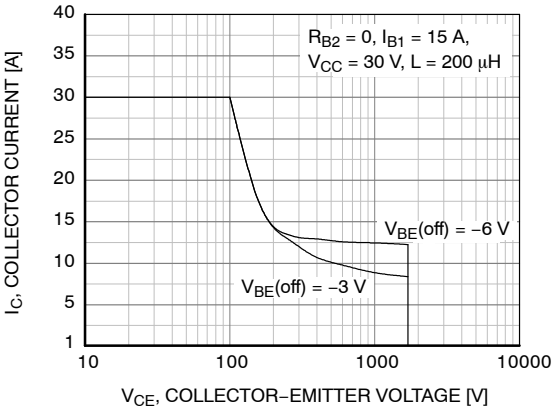


Figure 10. Reverse Bias Safe Operating Area

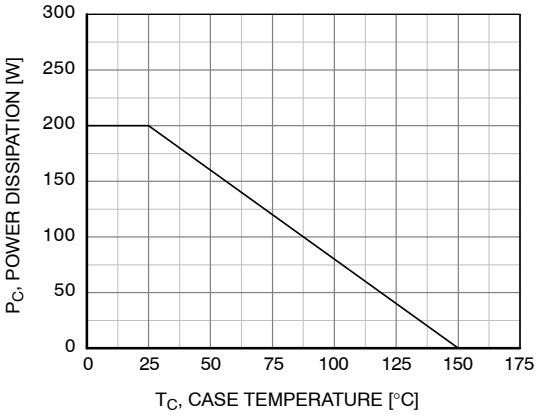


Figure 11. Power Derating

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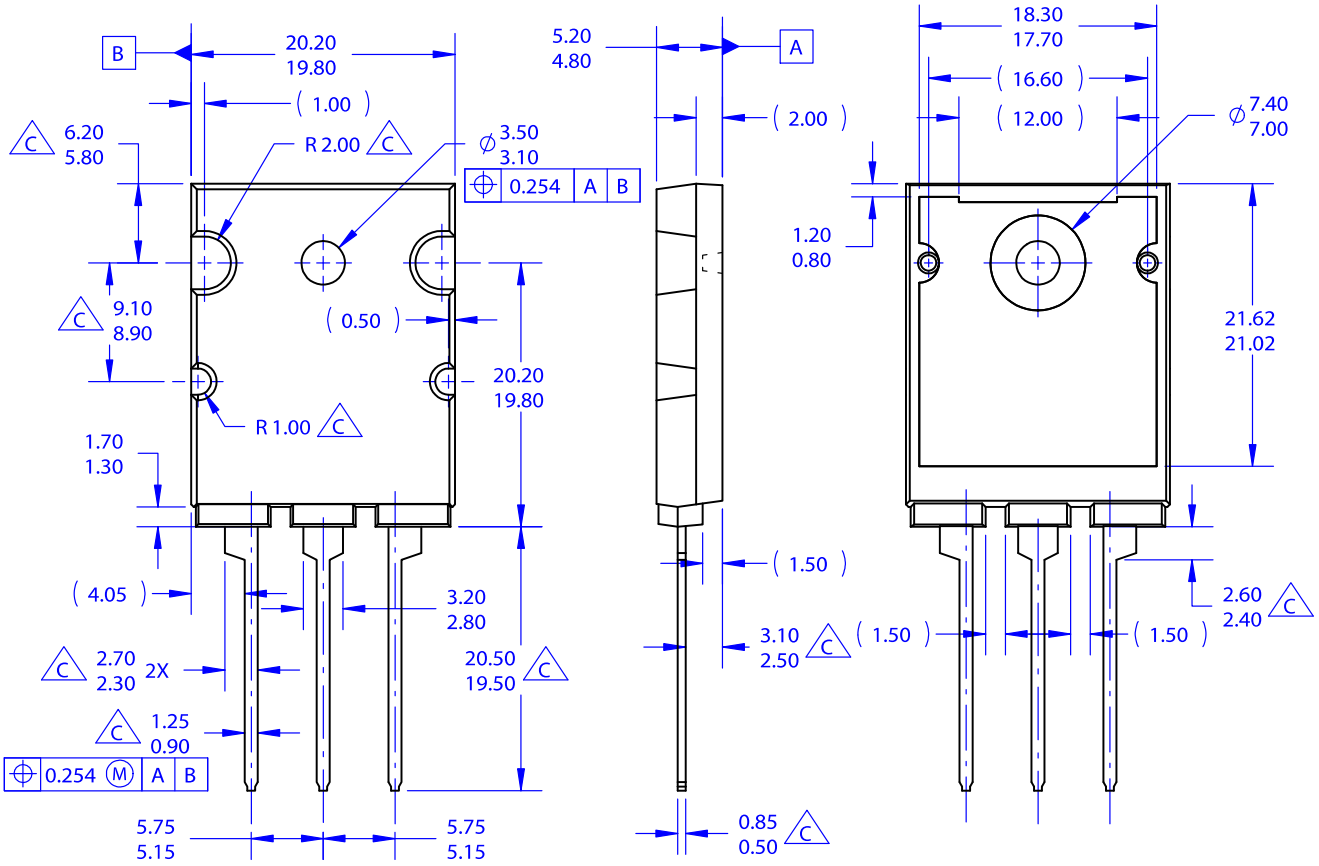
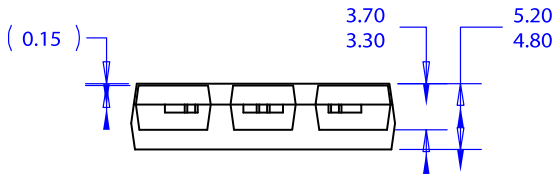
DATE 31 OCT 2016



FRONT VIEW SIDE VIEW BACK VIEW



BOTTOM VIEW

NOTES:

A. PACKAGE REFERENCE: JEDEC TO264 VARIATION AA.
B. ALL DIMENSIONS ARE IN MILLIMETERS.
C OUT OF JEDEC STANDARD VALUE.
D. DIMENSION AND TOLERANCE AS PER ASME Y14.5-1994.
E. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.

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