

### **FJL6920**

# **High Voltage Color Display Horizontal Deflection Output**

- High Collector-Base Breakdown Voltage : BV<sub>CBO</sub> = 1700V
- Low Saturation Voltage : V<sub>CE</sub>(sat) = 3V (Max.)
- For Color Monitor



### **NPN Triple Diffused Planar Silicon Transistor**

### Absolute Maximum Ratings T<sub>C</sub>=25°C unless otherwise noted

Symbol	Parameter	Rating	Units
V <sub>CBO</sub>	Collector-Base Voltage	1700	V
V <sub>CEO</sub>	Collector-Emitter Voltage	800	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current (DC)	20	А
I <sub>CP</sub> *	Collector Current (Pulse)	30	А
P <sub>C</sub>	Collector Dissipation	200	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-55 ~ 150	°C

<sup>\*</sup> Pulse Test: PW=300µs, duty Cycle=2% Pulsed

### Electrical Characteristics T<sub>C</sub>=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Units
I <sub>CES</sub>	Collector Cut-off Current	V <sub>CB</sub> =1400V, R <sub>BE</sub> =0			1	mA
I <sub>CBO</sub>	Collector Cut-off Current	V <sub>CB</sub> =800V, I <sub>E</sub> =0			10	μΑ
I <sub>EBO</sub>	Emitter Cut-off Current	$V_{EB}$ =4V, $I_{C}$ =0			1	mA
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> =500μA, I <sub>E</sub> =0	1700			V
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> =5mA, I <sub>B</sub> =0	800			V
BV <sub>EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> =500μA, I <sub>C</sub> =0	6			V
h <sub>FE1</sub>	DC Current Gain	V <sub>CE</sub> =5V, I <sub>C</sub> =1A	8			
$h_{FE2}$		$V_{CE}$ =5V, $I_{C}$ =11A	5.5		8.5	
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	I <sub>C</sub> =11A, I <sub>B</sub> =2.75A			3	V
V <sub>BE</sub> (sat)	Base-Emitter Saturation Voltage	I <sub>C</sub> =11A, I <sub>B</sub> =2.75A			1.5	V
t <sub>STG</sub> *	Storage Time	$V_{CC}$ =200V, $I_{C}$ =10A, $R_{L}$ =20 $\Omega$			3	μs
t <sub>F</sub> *	Fall Time	I <sub>B1</sub> =2.0A, I <sub>B2</sub> = - 4.0A		0.15	0.2	μs

<sup>\*</sup> Pulse Test: PW=20µs, duty Cycle=1% Pulsed

### Thermal Characteristics T<sub>C</sub>=25°C unless otherwise noted

Symbol	Parameter	Тур	Max	Units
$R_{\theta iC}$	R <sub>θiC</sub> Thermal Resistance, Junction to Case		0.625	°C/W

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# **Typical Characteristics**

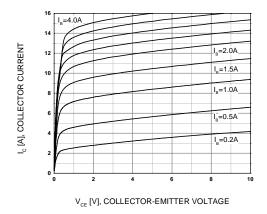


Figure 1. Static Characteristics

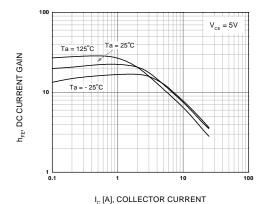


Figure 2. DC Current Gain

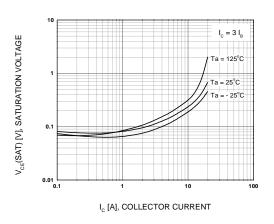


Figure 3. Collector-Emitter Saturation Voltage

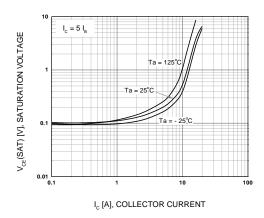


Figure 4. Collector-Emitter Saturation Voltage

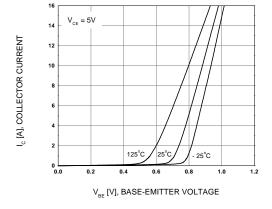


Figure 5. Base-Emitter On Voltage

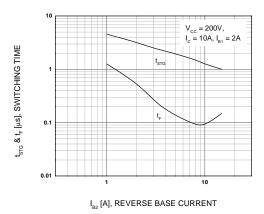


Figure 6. Resistive Load Switching Time

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# Typical Characteristics (Continued)

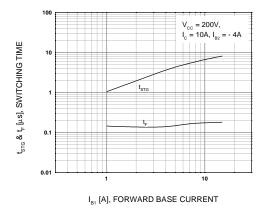
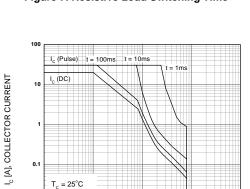


Figure 7. Resistive Load Switching Time



 $\mathbf{V}_{\mathtt{CE}}\left[\mathbf{V}\right]$ , COLLECTOR-EMITTER VOLTAGE

Figure 9. Forward Bias Safe Operating Area

Single Pulse

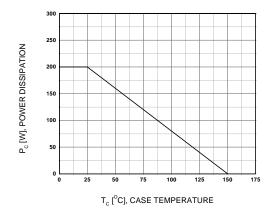


Figure 11. Power Derating

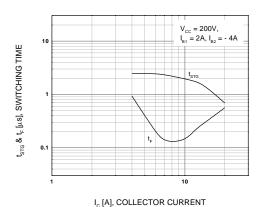
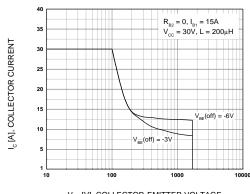


Figure 8. Resistive Load Switching Time



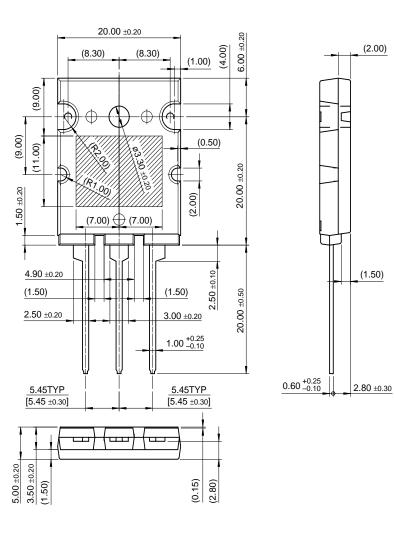
 ${\sf V}_{\sf CE}$  [V], COLLECTOR-EMITTER VOLTAGE

Figure 10. Reverse Bias Safe Operating Area

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# **Package Demensions**

# TO-264



Dimensions in Millimeters

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