

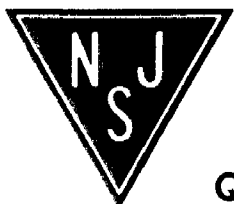
2N3265

absolute maximum ratings at 25°C case temperature (unless otherwise noted)

	2N3265
*Collector-Emitter Voltage ($V_{BE} = -1.5$ V, See Note 1)	150 V
*Collector-Emitter Voltage (Base Open, See Note 1)	90 V
*Emitter-Base Voltage	7 V
*Continuous Collector Current	25 A
*Continuous Base Current	10 A
*Safe Operating Area at Specified Temperatures	See Figures 6 and 7
*Continuous Device Dissipation at (or below) 75°C Case Temperature (See Note 2)	125 W
*Continuous Device Dissipation at 100°C Case Temperature (See Note 2)	100 W
Continuous Device Dissipation at (or below) 25°C Free-Air Temperature (See Note 3)	4 W
*Unclamped Inductive Load Energy (See Note 4)	2 mJ
*Operating Collector Junction Temperature Range	-65°C to 200°C
*Storage Temperature Range	-65°C to 200°C
Lead or Terminal Temperature 1/8 Inch from Case for 10 Seconds	260°C

- NOTES: 1. These values apply only when the collector-emitter voltage is applied with the transistor in the off-state with the base-emitter diode reverse-biased or open-circuited, as specified. In operation, the limitations of Figure 6 or 7, as applicable, must be observed.
2. For operation above 75°C case temperature, refer to Dissipation Derating Curve, Figure 8.
3. For operation above 25°C free-air temperature refer to Dissipation Derating Curve, Figure 9.
4. This rating is based on the capability of the transistor to operate safely in the circuit of Figure 5. $L = 40 \mu\text{H}$, $R_{BB2} = 20 \Omega$, $V_{BB2} = 6$ V, $R_S = 0.1 \Omega$, $V_{CC} = 20$ V. Energy $\approx I_C^2 L/2$.

*JEDEC registered data. This data sheet contains all applicable registered data in effect at the time of publication.



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*electrical characteristics at 25°C case temperature (unless otherwise noted)

PARAMETER	TEST CONDITIONS	2N3265		UNIT
		MIN	MAX	
$V_{(BR)CEO}$ Collector-Emitter Breakdown Voltage	$I_C = 200 \text{ mA}$, $I_B = 0$, See Note 5	90		V
I_{CEV} Collector Cutoff Current	$V_{CE} = 120 \text{ V}$, $V_{BE} = -1.5 \text{ V}$			mA
	$V_{CE} = 150 \text{ V}$, $V_{BE} = -1.5 \text{ V}$	20		
	$V_{CE} = 120 \text{ V}$, $V_{BE} = -1.5 \text{ V}$, $T_C = 125^\circ\text{C}$			
	$V_{CE} = 150 \text{ V}$, $V_{BE} = -1.5 \text{ V}$, $T_C = 125^\circ\text{C}$	20		
I_{EBO} Emitter Cutoff Current	$V_{EB} = 7 \text{ V}$, $I_C = 0$		5	mA
h_{FE} Static Forward Current Transfer Ratio	$V_{CE} = 3 \text{ V}$, $I_C = 15 \text{ A}$, See Notes 5 and 6			
	$V_{CE} = 2 \text{ V}$, $I_C = 15 \text{ A}$, See Notes 5 and 6	20	55	
V_{BE} Base-Emitter Voltage	$I_B = 2 \text{ A}$, $I_C = 20 \text{ A}$, See Notes 5 and 6		1.8	V
$V_{CE(sat)}$ Collector-Emitter Saturation Voltage	$I_B = 2 \text{ A}$, $I_C = 20 \text{ A}$, See Notes 5 and 6		1	V
$ h_{fe} $ Small-Signal Common-Emitter Forward Current Transfer Ratio	$V_{CE} = 10 \text{ V}$, $I_C = 3 \text{ A}$, $f = 5 \text{ MHz}$		4	

*switching characteristics at 25°C case temperature

PARAMETER	TEST CONDITIONS†	2N3265		UNIT
		MAX		
t_r Rise Time	$I_C = 15 \text{ A}$, $I_{B(1)} = 1.2 \text{ A}$, $I_{B(2)} = -1.2 \text{ A}$, $V_{BE(off)} = -6.3 \text{ V}$, $R_L = 2 \Omega$, See Figure 4	0.5		μs
t_s Storage Time		1.5		
t_f Fall Time		0.5		
t_{on} Turn-On Time		0.5		
t_{off} Turn-Off Time		2		

† Voltage and current values shown are nominal; exact values vary slightly with transistor parameters.

*JEDEC registered data