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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 μH, R_{BB2} = 20 Ω, V_{BB2} = 6 V, R_S = 0.1 Ω, V_{CC} = 20 V. Energy ≈ $I_C^2 L/2$.

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

*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 mA,	I_B = 0,	See Note 5	90		V
I_{CEV}	Collector Cutoff Current	V_{CE} = 120 V,	V_{BE} = −1.5 V				mA
		V_{CE} = 150 V,	V_{BE} = −1.5 V			20	
		V_{CE} = 120 V,	V_{BE} = −1.5 V,	T_C = 125°C			
		V_{CE} = 150 V,	V_{BE} = −1.5 V,	T_C = 125°C		20	
I_{EBO}	Emitter Cutoff Current	V_{EB} = 7 V,	I_C = 0			5	mA
h_{FE}	Static Forward Current Transfer Ratio	V_{CE} = 3 V,	I_C = 15 A,	See Notes 5 and 6			
		V_{CE} = 2 V,	I_C = 15 A,	See Notes 5 and 6	20	55	
V_{BE}	Base-Emitter Voltage	I_B = 2 A,	I_C = 20 A,	See Notes 5 and 6		1.8	V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_B = 2 A,	I_C = 20 A,	See Notes 5 and 6		1	V
$\|h_{fe}\|$	Small-Signal Common-Emitter Forward Current Transfer Ratio	V_{CE} = 10 V,	I_C = 3 A,	f = 5 MHz	4		

*switching characteristics at 25°C case temperature

PARAMETER		TEST CONDITIONS†			2N3265	UNIT
					MAX	
t_r	Rise Time	I_C = 15 A,	$I_{B(1)}$ = 1.2 A,	$I_{B(2)}$ = −1.2 A,	0.5	μs
t_s	Storage Time				1.5	
t_f	Fall Time	$V_{BE(off)}$ = −6.3 V,	R_L = 2 Ω,	See Figure 4	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