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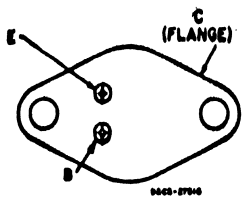
2N6470
Silicon N-P-N

Maximum Ratings, *Absolute-Maximum Values:*

*COLLECTOR-TO-BASE VOLTAGE	V_{CBO}	50	V
COLLECTOR-TO-EMITTER VOLTAGE:			
* With external base-to-emitter resistance (R_{BE}) = 100 Ω	V_{CER}	50	V
With base open	V_{CEO}	40	V
*EMITTER-TO-BASE VOLTAGE	V_{EBO}	5	V
*CONTINUOUS COLLECTOR CURRENT	I_C	15	A
*CONTINUOUS BASE CURRENT	I_B	5	A
*TRANSISTOR DISSIPATION:	P_T		
At case temperatures up to 25°C		125	W
At case temperatures above 25°C		← Derate linearly 200°C →	
*TEMPERATURE RANGE:			
Storage & Operating (Junction)		← −65 to +200 →	°C
*PIN TEMPERATURE (During Soldering):			
At distances ≥ 1/32" (0.8 mm) from seating plane for 10 s max.		← +235 →	°C

* In accordance with JEDEC registration data format (JS-6 RDF-2).

TERMINAL DESIGNATIONS



JEDEC TO-3

ELECTRICAL CHARACTERISTICS *At case temperature (T_C) = 25°C unless otherwise specified*

CHARACTERISTIC	SYMBOL	TEST CONDITIONS VOLTAGE V dc	TEST CONDITIONS CURRENT A dc		LIMITS 2N6470		UNITS
		V_{CE}	I_C	I_B	Min.	Max.	
Collector-Cutoff Current: With external base-emitter resistance (R_{BE}) = 100 Ω	I_{CER}	35			–	500	μA
* With base-emitter junction reverse-biased V_{BE} = −1.5 V	I_{CEX}	45			–	500	μA
* With reverse bias, V_{BE} = −1.5 V, and T_C = 150°C		40			–	5	mA
* With base open	I_{CEO}	20		0 0 0	–	1	mA
* Emitter-Cutoff Current: V_{BE} = −5 V	I_{EBO}		0		–	1	mA
* DC Forward-Current Transfer Ratio	h_{FE}	4 4	5[a] 15[a]		20 5	150 –	
Collector-to-Emitter Sustaining Voltage: * With base open	$V_{CEO(sus)}$		0.2	0	40[b]	–	V
With external base-emitter resistance (R_{BE}) = 100 Ω	$V_{CER(sus)}$		0.2		50[b]	–	V
* Base-to-Emitter Voltage	V_{BE}	4 4	5[a] 15[a]		– –	1.3 3.5	V
* Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$		5[a] 15[a]	0.5 5	– –	1.3 3.5	V
* Magnitude of Common-Emitter Small-Signal Short-Circuit Forward-Current Transfer Ratio: f = 1 MHz	$\|h_{fe}\|$	4	1		5	–	
* Common-Emitter, Small-Signal, Short-Circuit, Forward-Current Transfer Ratio: f = 1 kHz	h_{fe}	4	1		25	–	
Thermal Resistance: Junction-to-case	$R_{\theta JC}$				–	1.4	°C/W