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## NTE2684

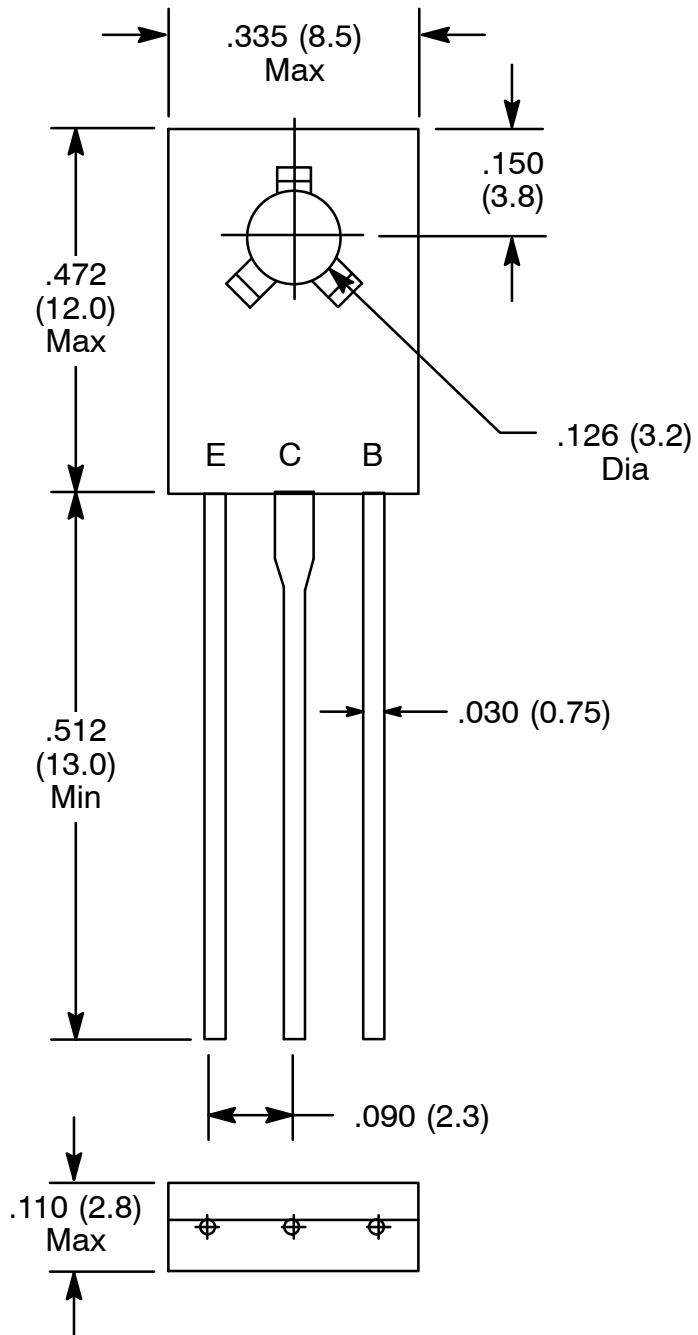
### Silicon NPN Transistor High Current Switch TO126 Type Package

**Absolute Maximum Ratings:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Collector-Base Voltage (Open Emitter), $V_{CBO}$ .....	120V
Collector-Emitter Voltage (Open Base), $V_{EBO}$ .....	75V
Emitter-Base Voltage (Open Collector), $V_{EBO}$ .....	5V
DC Collector Current, $I_C$ .....	5A
Peak Collector Current, $I_{CM}$ .....	10A
Peak Base Current, $I_{BM}$ .....	2A
Total Power Dissipation ( $T_C \leq +75^\circ\text{C}$ ), $P_T$ .....	15W
Operating Junction Temperature, $T_J$ .....	+150°C
Storage Temperature Range, $T_{stg}$ .....	-65° to +150°C
Thermal Resistance, Junction-to-Ambient, $R_{thJA}$ .....	100K/W
Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	5K/W

**Electrical Characteristic:** ( $T_J = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 0.5A$	-	-	0.9	V	
		$I_C = 7A, I_B = 0.7A$	-	-	1.2	V	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5A, I_B = 0.5A$	-	-	1.7	V	
		$I_C = 7A, I_B = 0.7A$	-	-	2.0	V	
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 100V,$ $I_E = 0$		-	-	0.1	$\leq A$
			$T_J = +100^\circ\text{C}$	-	-	10	$\leq A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$	-	-	0.1	$\leq A$	
DC Current Gain	$h_{FE}$	$I_C = 0.5A, V_{CE} = 10V$	45	-	450		
Collector Capacitance	$C_C$	$I_E = 0, V_{CB} = 10V, f = 1\text{MHz}$	-	40	-	pF	
Transition Frequency	$f_T$	$I_C = 0.5A, V_{CE} = 5V, f = 100\text{MHz}$	-	100	-	MHz	
Turn-On Time	$t_{on}$	$I_{Con} = 1A, I_{Bon} = -I_{Boff} = 0.1A$	-	60	100	ns	
		$I_{Con} = 2A, I_{Bon} = -I_{Boff} = 0.2A$	-	-	80	ns	
		$I_{Con} = 5A, I_{Bon} = -I_{Boff} = 0.5A$	-	180	300	ns	
Turn-Off Time	$t_{off}$	$I_{Con} = 1A, I_{Bon} = -I_{Boff} = 0.1A$	-	600	800	ns	
		$I_{Con} = 2A, I_{Bon} = -I_{Boff} = 0.2A$	-	450	700	ns	
		$I_{Con} = 5A, I_{Bon} = -I_{Boff} = 0.5A$	-	350	500	ns	



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