

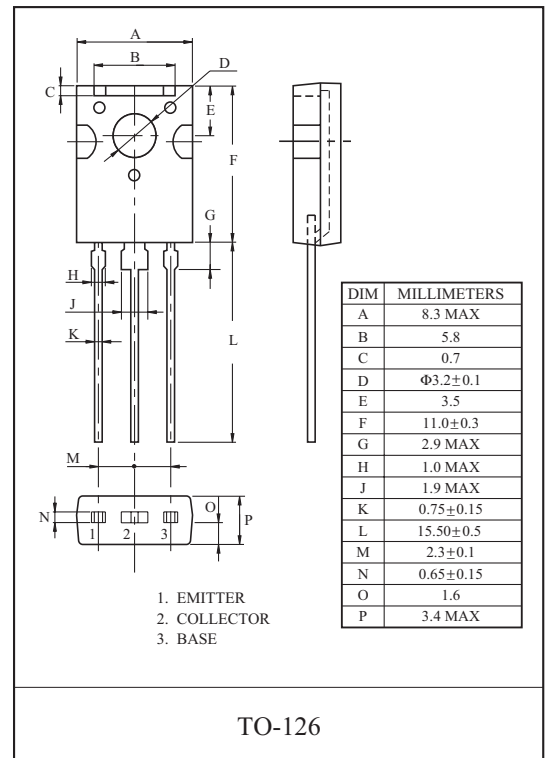
SWITCHING REGULATOR APPLICATION.
HIGH VOLTAGE AND HIGH SPEED
SWITCHING APPLICATION.

FEATURES

- Excellent Switching Times
: $t_{on}=1.1 \mu\text{s}(\text{Max.})$, $t_f=0.7 \mu\text{s}(\text{Max.})$, at $I_C=1\text{A}$
- High Collector Voltage : $V_{CBO}=700\text{V}$.

MAXIMUM RATING ($T_a=25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	700	V
Collector-Emitter Voltage		V_{CEO}	400	V
Emitter-Base Voltage		V_{EBO}	9	V
Collector Current	DC	I_C	1.5	A
	Pulse	I_{CP}	3	
Base Current		I_B	0.75	A
Collector Power Dissipation	$T_a=25$	P_C	1.5	W
	$T_c=25$		20	
Junction Temperature		T_j	150	
Storage Temperature Range		T_{stg}	-55 150	



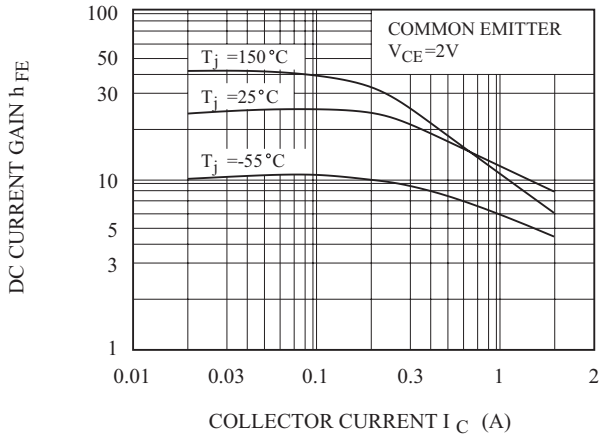
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Emitter Cut-off Current	I_{EBO}	$V_{EB}=9\text{V}$, $I_C=0$	-	-	10	μA
Collector Cut-off Current	I_{CBO}	$V_{CB}=700\text{V}$, $I_E=0$	-	-	10	μA
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=2\text{V}$, $I_C=0.5\text{A}$	9	-	38	
	$h_{FE(2)}$	$V_{CE}=2\text{V}$, $I_C=1\text{A}$	5	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=0.5\text{A}$, $I_B=0.1\text{A}$	-	-	0.5	V
		$I_C=1\text{A}$, $I_B=0.25\text{A}$	-	-	1	
		$I_C=1.5\text{A}$, $I_B=0.5\text{A}$	-	-	3	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=0.5\text{A}$, $I_B=0.1\text{A}$	-	-	1	V
		$I_C=1\text{A}$, $I_B=0.25\text{A}$	-	-	1.2	
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $f=0.1\text{MHz}$, $I_E=0$	-	21	-	pF
Transition Frequency	f_T	$V_{CE}=10\text{V}$, $I_C=0.1\text{A}$	4	-	-	MHz
Turn-On Time	t_{on}	<p style="font-size: small; margin-top: 5px;">$I_{B1}=I_{B2}=0.2\text{A}$ DUTY CYCLE $\leq 2\%$</p>	-	-	1.1	μs
Storage Time	t_{stg}		-	-	4.0	μs
Fall Time	t_f		-	-	0.7	μs

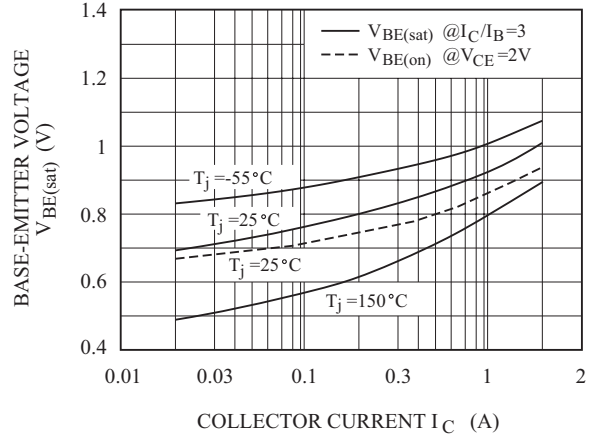
Note : h_{FE} Classification R:9 15, O:13 21, Y:20~38

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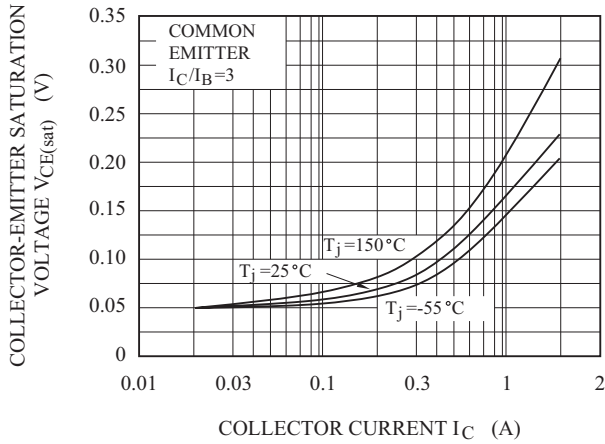
DC CURRENT GAIN



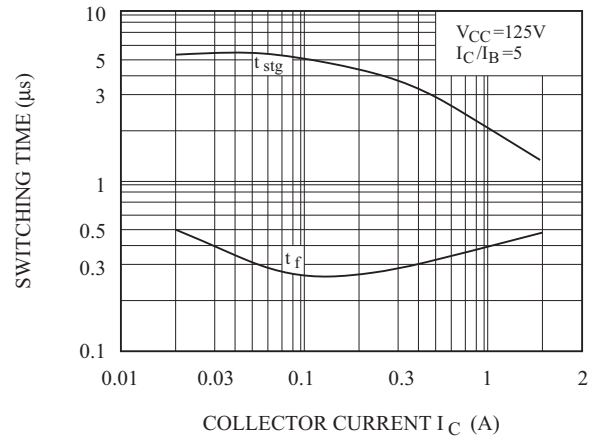
$V_{BE(sat)} - I_C$



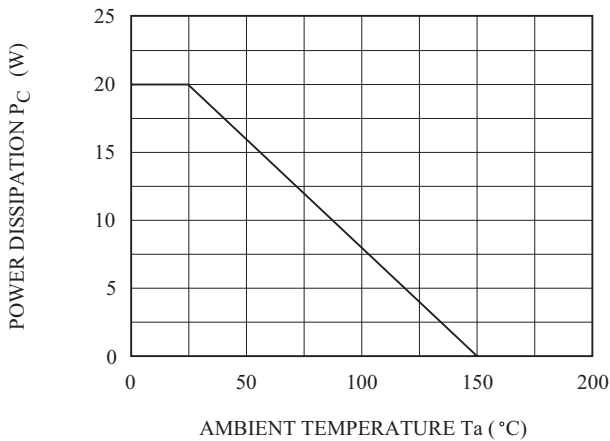
$V_{CE(sat)} - I_C$



SWITCHING CHARACTERISTIC



$P_C - T_a$



SAFE OPERATING AREA

