

HIGH VOLTAGE SWITCHING.
POWER SUPPLY SWITCHING FOR TELEPHONES.

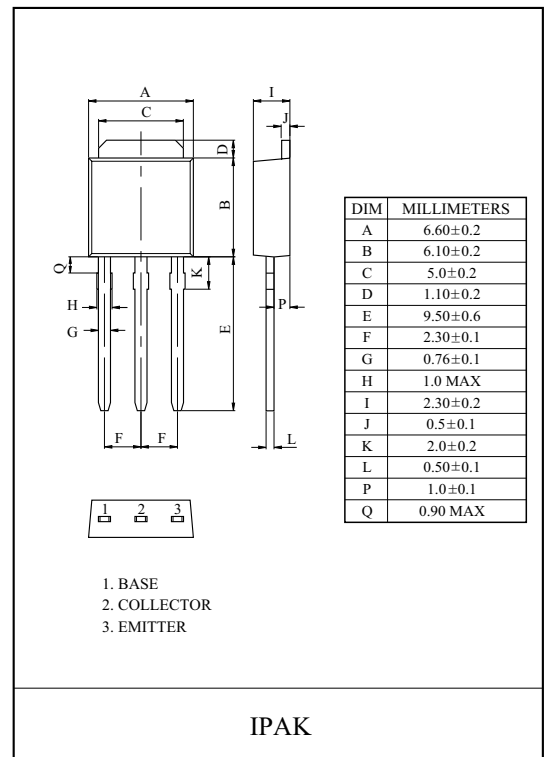
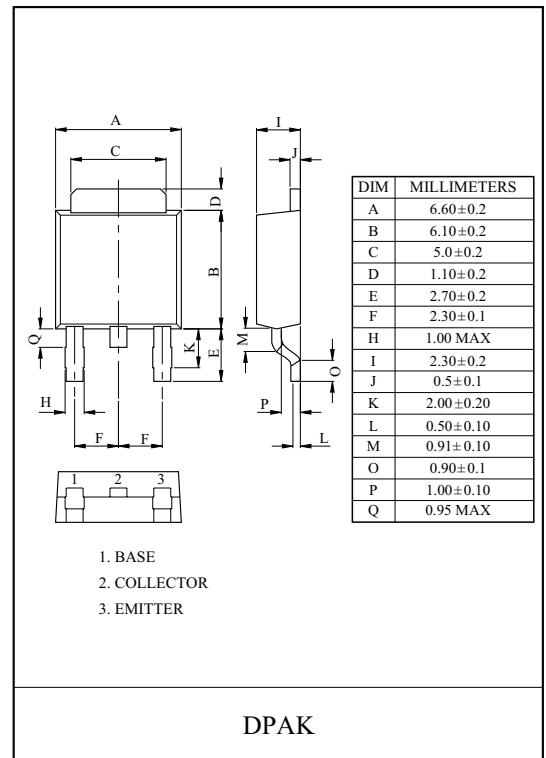
FEATURES

- High Voltage : $V_{CEO} = -600V$.
- High Speed Switching Time.
: $t_r \leq 1.0\mu s$ ($I_C = -0.5A$)
- Low Collector Emitter Saturation Voltage.
: $V_{CE(sat)} = -0.28V$ ($I_C = -0.3A, I_B = -60mA$)
- Wide Safe Operating Area (SOA).

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-600	V
Collector-Emitter Voltage		V_{CEO}	-600	V
Emitter-Base Voltage		V_{EBO}	-7	V
Collector Current	DC	I_C	-1.0	A
	Pulse *	I_{CP}	-2.0	
Collector Power Dissipation		P_C	1.0	W
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55 ~ 150	$^\circ C$

* $PW \leq 10ms$, Duty Cycle $\leq 50\%$.



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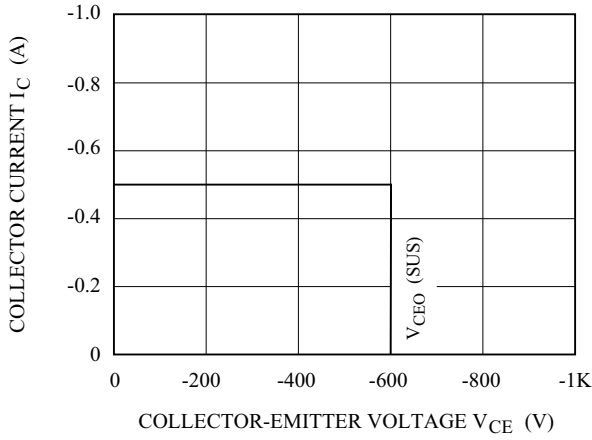
ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=-600V, I_E=0$	-	-	-10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=-7.0V, I_C=0$	-	-	-10	μA
DC Current Gain	$h_{FE}(1)$ (Note)		$V_{CE}=-5.0V, I_C=-0.1A$	30	-	120	
	$h_{FE}(2)$		$V_{CE}=-5.0V, I_C=-0.5A$	5	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=-0.3A, I_B=-60mA$	-	-0.28	-1.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=-0.3A, I_B=-60mA$	-	-0.85	-1.2	V
Gain-Bandwidth Product		f_T	$V_{CE}=-10V, I_E=50mA$	-	28	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=-10V, I_E=0, f=1MHz$	-	42	-	pF
Switching Time	Turn On Time	t_{on}	$I_C=-0.5A, R_L=500\Omega,$ $I_{B1}=-I_{B2}=-0.1A, V_{CC}=-250V$	-	0.1	0.5	μs
	Storage Time	t_{stg}		-	3.5	5.0	
	Fall Time	t_f		-	0.08	0.5	

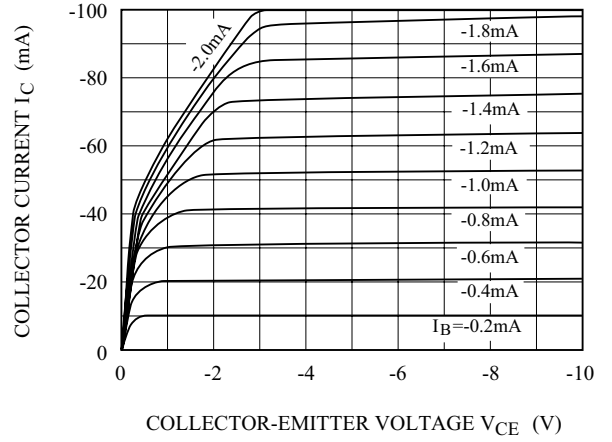
Note : h_{FE} Classification O:30~80, Y:60~120.

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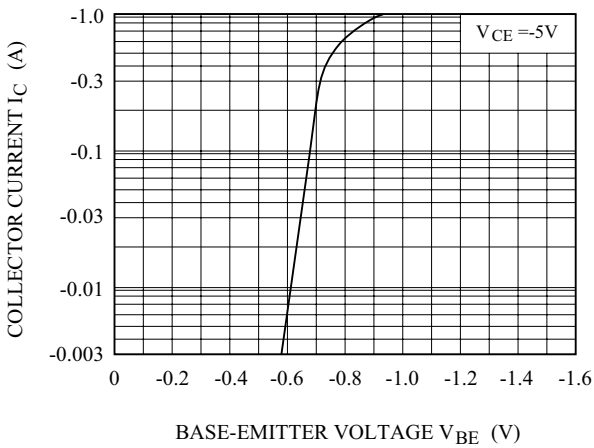
REVERSE BIAS
SAFE OPERATING AREA



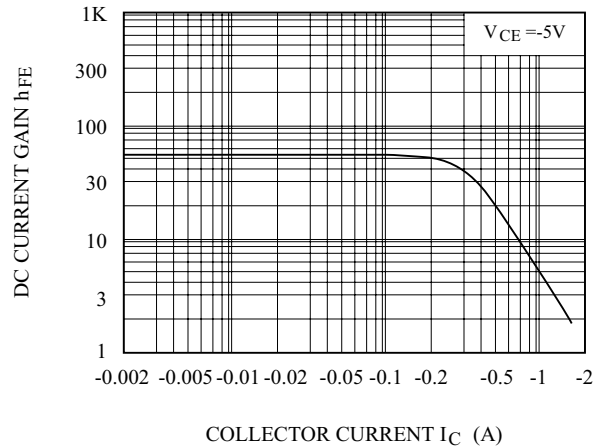
$I_C - V_{CE}$



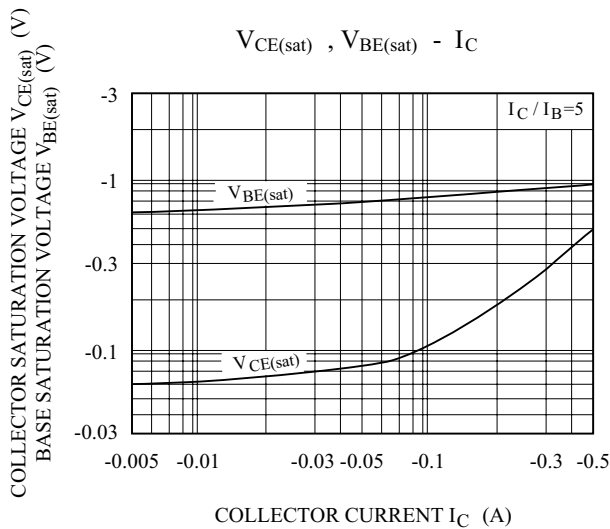
$I_C - V_{BE}$



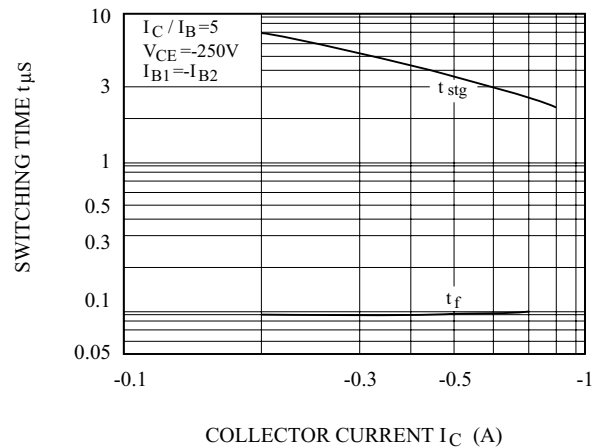
$h_{FE} - I_C$



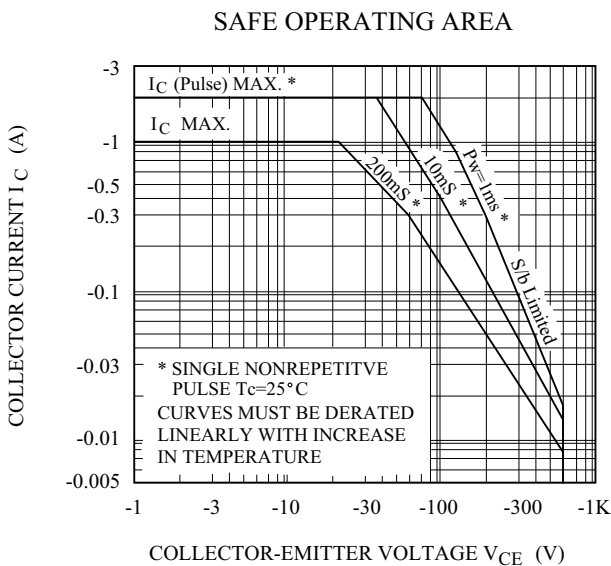
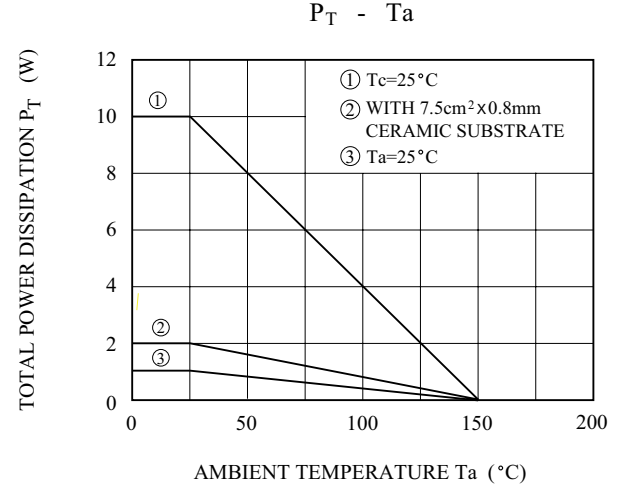
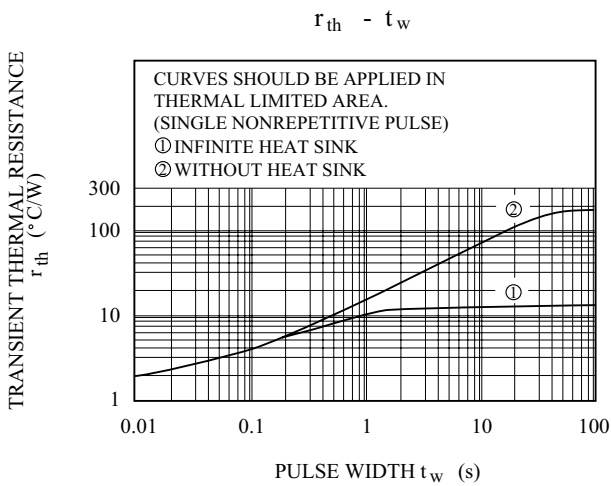
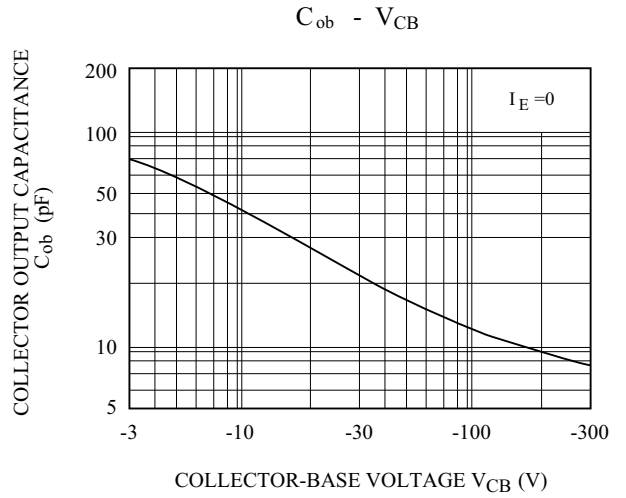
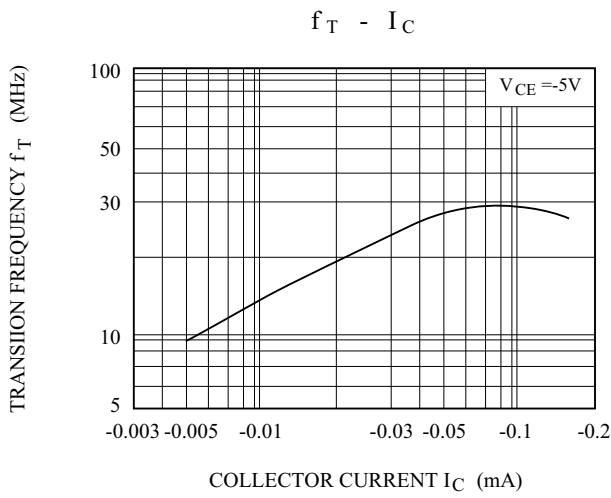
$V_{CE(sat)}, V_{BE(sat)} - I_C$



$t - I_C$



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