

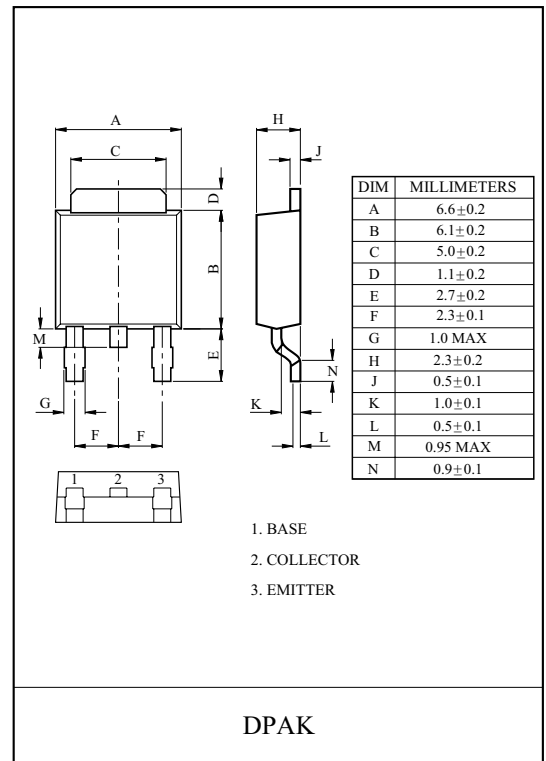
GENERAL PURPOSE APPLICATION.

### FEATURES

- Low Collector Saturation Voltage  
:  $V_{CE(sat)}=1.0V(\text{Max})$  at  $I_C=2A, I_B=0.2A$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	80	V
Collector-Emitter Voltage		$V_{CEO}$	60	V
		$V_{CER}$	100	
Emitter-Base Voltage		$V_{EBO}$	10	V
Collector Current		$I_C$	3	A
Base Current		$I_B$	0.5	A
Collector Power Dissipation	$T_a=25$	$P_C$	1	W
	$T_c=25$		20	
Junction Temperature		$T_j$	150	
Storage Temperature Range		$T_{stg}$	-55 150	

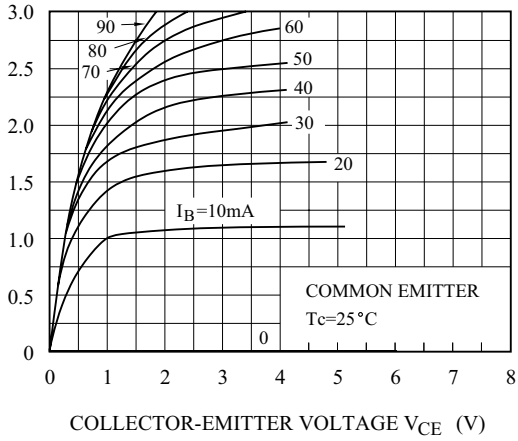


ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

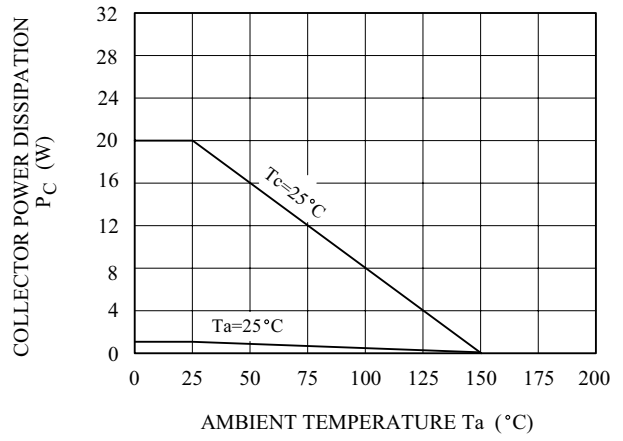
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=80V, I_E=0$	-	-	1	$\mu\text{A}$
		$I_{CER}$	$V_{CE}=100V, R_{BE}=10k\Omega$	-	-	1	$\mu\text{A}$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=10V, I_C=0$	-	-	1	$\mu\text{A}$
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	60	-	-	V
DC Current Gain		$h_{FE(1)}$	$V_{CE}=5V, I_C=1mA$	100	-	-	
		$h_{FE(2)}$	$V_{CE}=5V, I_C=0.5A$	150	-	250	
Collector Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=2A, I_B=0.2A$	-	0.25	1.0	V
Base-Emitter Voltage		$V_{BE}$	$V_{CE}=5V, I_C=0.5A$	-	0.7	1.0	V
Transition Frequency		$f_T$	$V_{CE}=5V, I_C=0.5A$	-	30	-	MHz
Collector Output Capacitance		$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	35	-	pF
Switching Time	Turn-on Time	$t_{on}$	<p><math>I_{B1}=I_{B2}=0.2A</math> DUTY CYCLE <math>\leq 1\%</math></p>	-	0.085	-	$\mu\text{S}$
	Storage Time	$t_{stg}$		-	1.02	-	
	Fall Time	$t_f$		-	0.041	-	

# KTC2030D

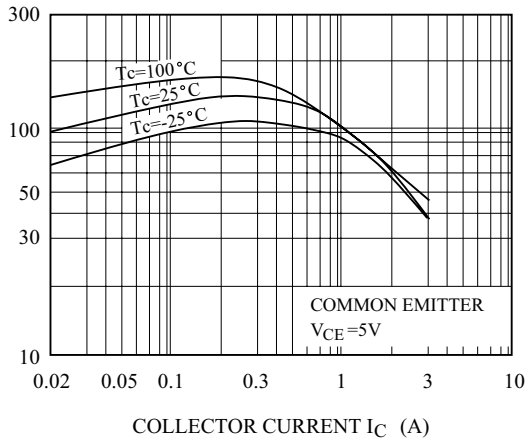
$I_C - V_{CE}$



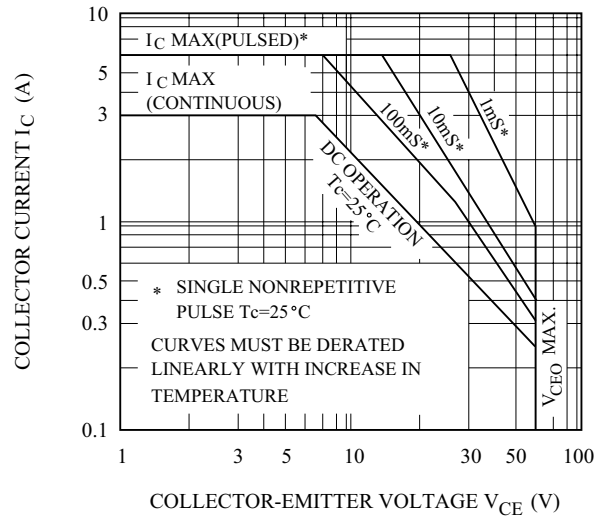
P<sub>c</sub> - T<sub>a</sub>



$h_{FE} - I_C$



SAFE OPERATING AREA



V<sub>CE(sat)</sub> - I<sub>C</sub>

