

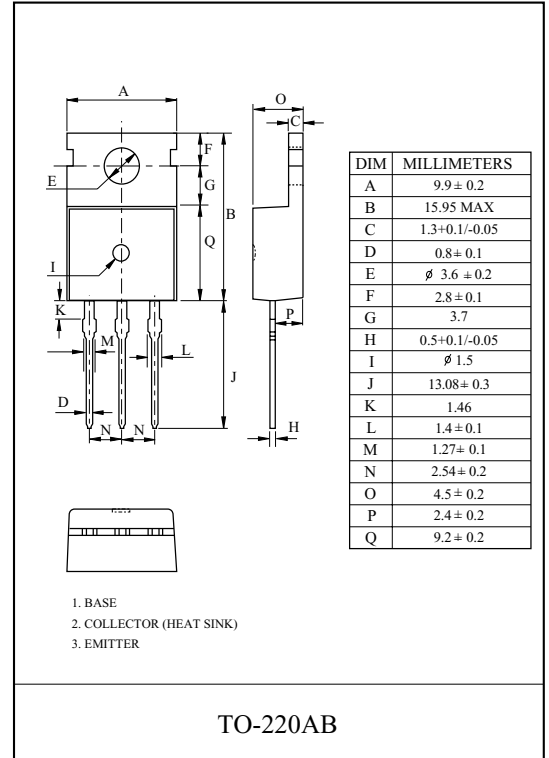
SWITCHING REGULATOR APPLICATION.  
HIGH VOLTAGE SWITCHING APPLICATION.  
HIGH SPEED DC-DC CONVERTER APPLICATION.  
FLUORESCENT LIGHT BALLASTOR APPLICATION.

### FEATURES

- Excellent Switching Times  
:  $t_{stg}=2.5\mu\text{S}(\text{Max.})$ ,  $t_f=0.3\mu\text{S}(\text{Max.})$ , at  $I_C=2.5\text{A}$
- High Collector Voltage :  $V_{CBO}=1050\text{V}$ .

### MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	1050	V
Collector-Emitter Voltage		$V_{CEO}$	400	V
Emitter-Base Voltage		$V_{EBO}$	12	V
Collector Current	DC	$I_C$	5	A
	Pulse	$I_{CP}$	10	
Base Current		$I_B$	2.5	A
Collector Power Dissipation (Tc=25 °C)		$P_C$	75	W
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55 ~ 150	°C

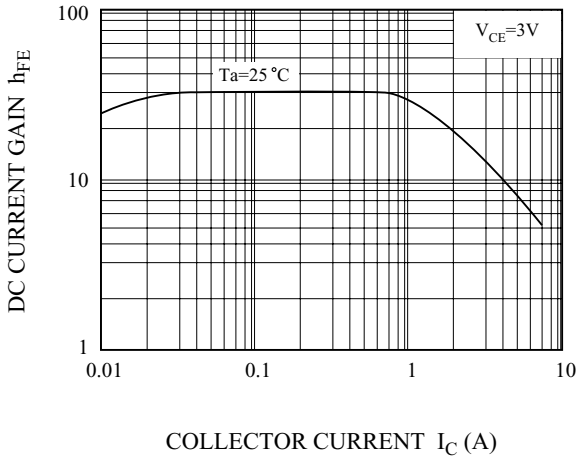


### ELECTRICAL CHARACTERISTICS (Ta=25 °C)

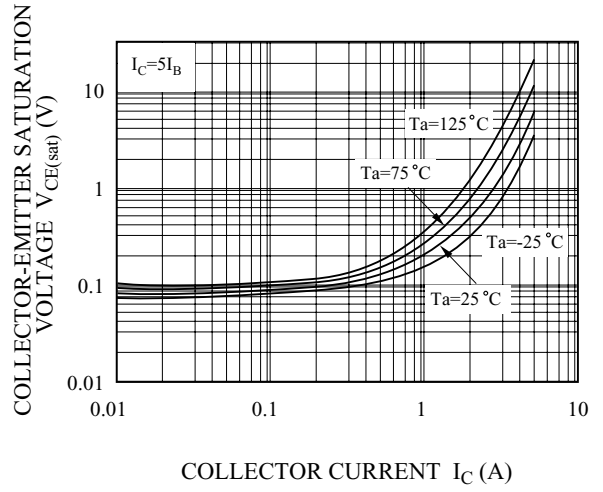
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=14\text{V}$ , $I_C=0$	-	-	10	$\mu\text{A}$
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5\text{V}$ , $I_C=10\text{mA}$	10	-	-	
	$h_{FE}(2)$	$V_{CE}=3\text{V}$ , $I_C=0.8\text{A}$	20	-	40	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1\text{A}$ , $I_B=0.2\text{A}$	-	-	0.5	V
		$I_C=3.5\text{A}$ , $I_B=1\text{A}$	-	-	1.5	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=3.5\text{A}$ , $I_B=1\text{A}$	-	-	1.2	V
		$I_C=2\text{A}$ , $I_B=0.5\text{A}$	-	-	1.6	
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}$ , $f=0.1\text{MHz}$ , $I_E=0$	-	45	-	pF
Turn-On Time	$t_{on}$	<p><math>I_{B1}=+0.5\text{A}</math>, <math>I_{B2}=-1.0\text{A}</math> DUTY CYCLE <math>\leq 2\%</math></p>	-	-	2.0	$\mu\text{S}$
Storage Time	$t_{stg}$		-	-	2.5	$\mu\text{S}$
Fall Time	$t_f$		-	-	0.3	$\mu\text{S}$

Note :  $h_{FE}$  Classification R:20 ~ 30, O:25 ~ 35, Y: 30~40

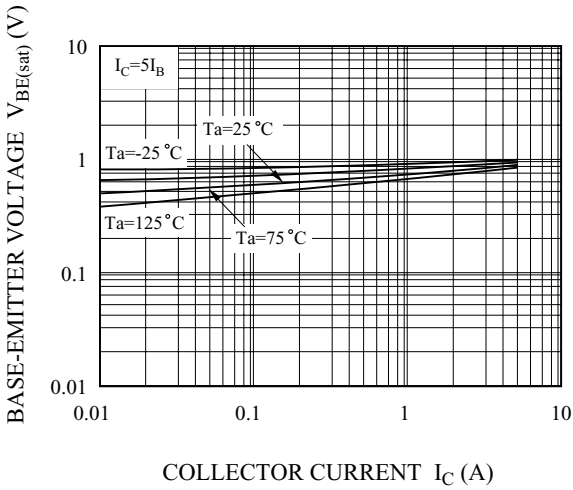
$h_{FE} - I_C$



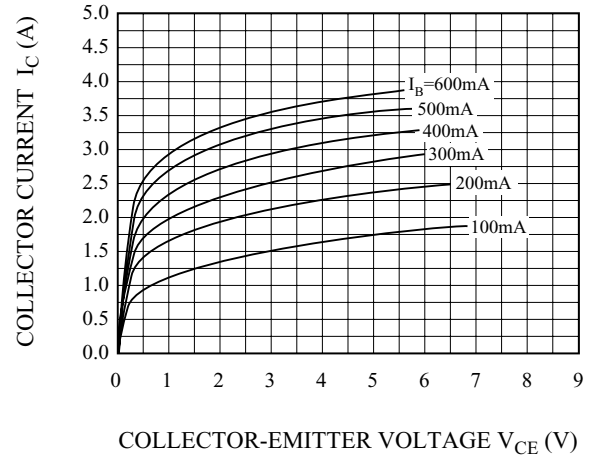
$V_{CE(sat)} - I_C$



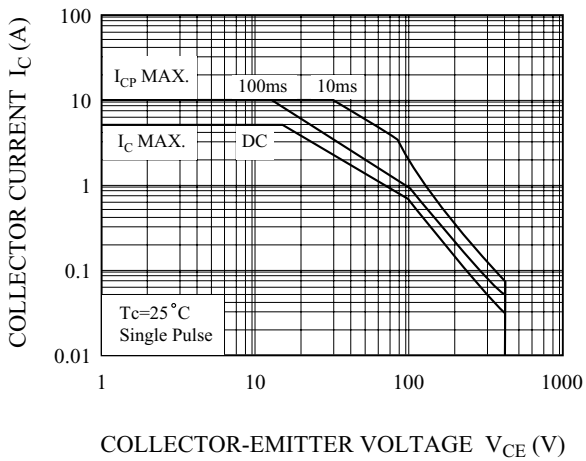
$V_{BE(sat)} - I_C$



$I_C - V_{CE}$



SAFE OPERATING AREA



$P_C - T_a$

