

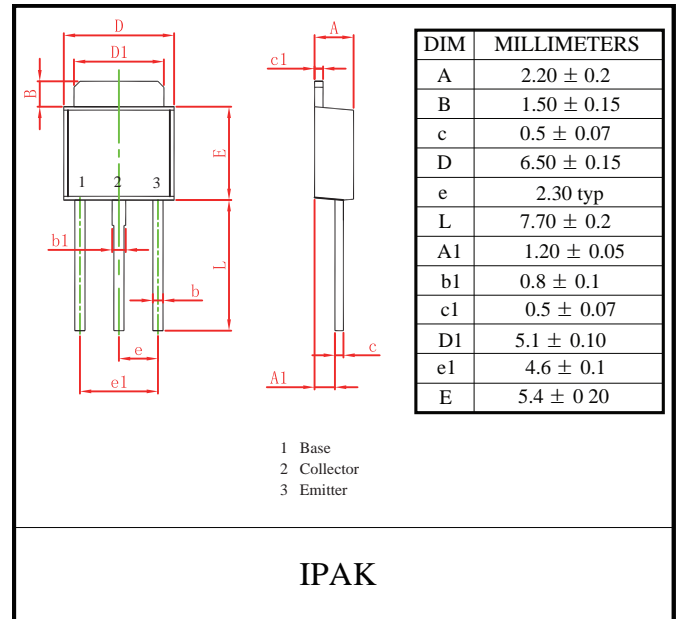
SWITCHING REGULATOR APPLICATION.  
HIGH VOLTAGE AND HIGH SPEED  
SWITCHING APPLICATION.

### FEATURES

- Excellent Switching Times  
:  $t_{on}=1.1\mu S(\text{Max.})$ ,  $t_f=0.5\mu S(\text{Max.})$ , at  $I_C=1.0A$
- High Collector Voltage :  $V_{CBO}=700V$ .

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

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
	Pulse	$I_{CP}$	3
Collector Power Dissipation	$I_B$	0.75	A
Collector Power Dissipation	$P_C$	1.5	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$



### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	700			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	9			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=700V, I_E=0$			1	mA
Collector cut-off current	$I_{CEO}$	$V_{CE}=400V, I_B=0$			0.5	mA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=9V, I_C=0$			1	mA
DC current gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=0.5A$	8		40	
	$h_{FE(2)}$	$V_{CE}=5V, I_C=1.5A$	5			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1A, I_B=250mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=1A, I_B=250mA$			1.2	V
Base-emitter voltage	$V_{BE}$	$I_E=2A$			3	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=100mA$ $f=1MHz$	5			MHz
Fall time	$t_f$	$I_C=1A, I_{B1}=-I_{B2}=0.2A$ $V_{CC}=100V$			0.5	$\mu s$
Storage time	$t_s$	$I_C=250mA$	2		4	$\mu s$

### CLASSIFICATION OF $h_{FE(1)}$

Rank							
Range	8- 10	10- 15	15- 20	20- 25	25- 30	30- 35	35- 40

