

# Power Transistor FP812

## Absolute Maximum Ratings (Ta=25°C)

Symbol	Ratings	Unit
V <sub>CB0</sub>	-120	V
V <sub>CEO</sub>	-120	V
V <sub>EBO</sub>	-6	V
I <sub>C</sub>	-8 (pulse -12)	A
I <sub>B</sub>	-3	A
P <sub>C</sub>	35 (T <sub>C</sub> =25°C)	W
T <sub>J</sub>	150	°C
T <sub>stg</sub>	-55 to +150	°C

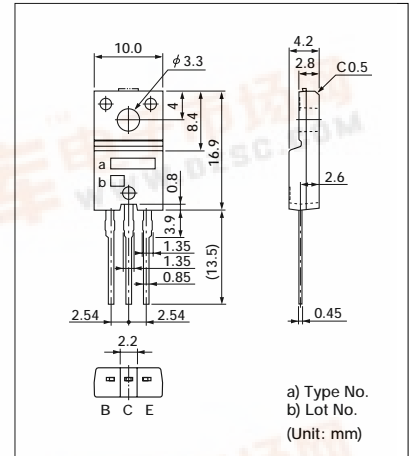
## Electrical Characteristics (Ta=25°C)

Symbol	Test Conditions	Ratings	Unit
I <sub>CB0</sub>	V <sub>CB</sub> = -120V	10max	μA
I <sub>EBO</sub>	V <sub>EB</sub> = -6V	10max	μA
V <sub>CEO</sub>	I <sub>C</sub> = -50mA	-120min	V
h <sub>FE</sub>	V <sub>CE</sub> = -4V, I <sub>C</sub> = -3A	70min	
V <sub>CE(sat)</sub>	I <sub>C</sub> = -3A, I <sub>B</sub> = -0.3A	-0.3max	V

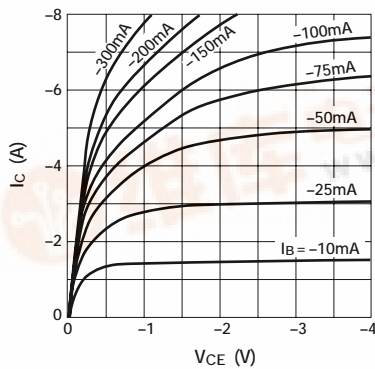
## Typical Switching Characteristics

V <sub>CC</sub> (V)	R <sub>L</sub> (Ω)	I <sub>C</sub> (A)	V <sub>BB1</sub> (V)	V <sub>BB2</sub> (V)	I <sub>B1</sub> (mA)	I <sub>B2</sub> (mA)	t <sub>on</sub> (μs)	t <sub>stg</sub> (μs)	t <sub>f</sub> (μs)
12	4	3	-10	5	-30	30	2.5	0.4	0.6

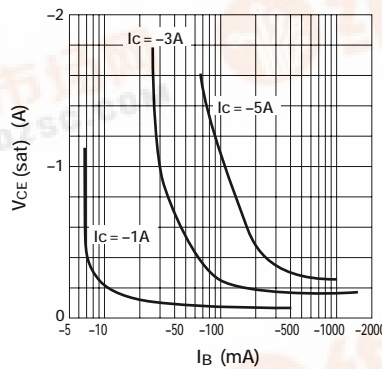
## External Dimensions FM20 (full-mold)



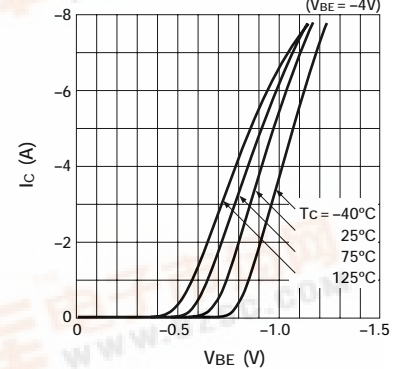
■ I<sub>C</sub> — V<sub>CE</sub> Characteristics (typ.)



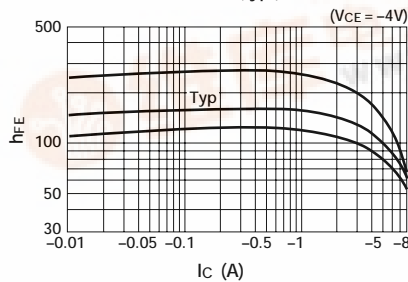
■ V<sub>CE(sat)</sub> — I<sub>B</sub> Characteristics (typ.)



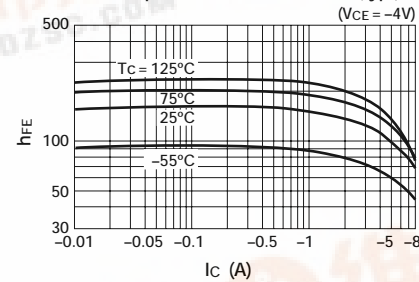
■ I<sub>C</sub> — V<sub>BE</sub> Temperature Characteristics (typ.)



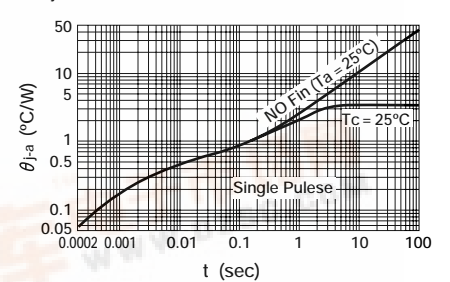
■ h<sub>FE</sub> — I<sub>C</sub> Characteristics (typ.)



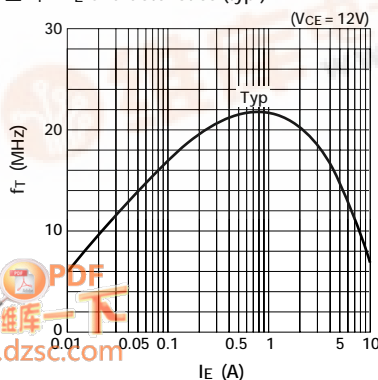
■ h<sub>FE</sub> — I<sub>C</sub> Temperature Characteristics (typ.)



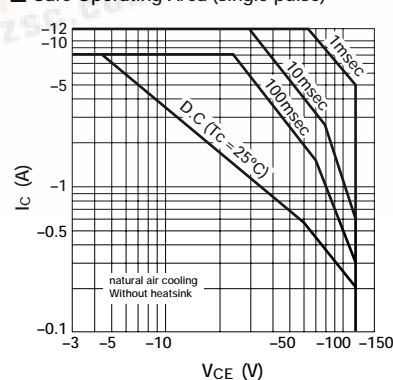
■ θ<sub>j-a</sub> — t Characteristics



■ f<sub>T</sub> — I<sub>E</sub> Characteristics (typ.)



■ Safe Operating Area (single pulse)



■ P<sub>C</sub> — T<sub>a</sub> Derating

