

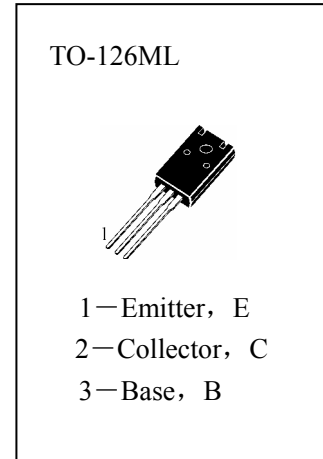
# H1684

## APPLICATIONS

Medium frequency power amplifier, Medium Seed switching.

## ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)

T <sub>stg</sub>	—Storage Temperature	.....	-55~150°C
T <sub>j</sub>	—Junction Temperature	.....	150°C
P <sub>C</sub>	—Collector Dissipation (T <sub>c</sub> =25°C)	.....	10W
P <sub>C</sub>	—Collector Dissipation (T <sub>A</sub> =25°C)	.....	1.5W
V <sub>CBO</sub>	—Collector-Base Voltage	.....	120V
V <sub>CEO</sub>	—Collector-Emitter Voltage	.....	100V
V <sub>EBO</sub>	—Emitter-Base Voltage	.....	6V
I <sub>C</sub>	—Collector Current	.....	1.5A



## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	120			V	I <sub>C</sub> =10 μ A, I <sub>E</sub> =0
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	100			V	I <sub>C</sub> =1mA, I <sub>B</sub> =0
BV <sub>EBO</sub>	Emitter-Base Breakdown Voltage	6			V	I <sub>E</sub> =10 μ A, I <sub>C</sub> =0
I <sub>CBO</sub>	Collector Cut-off Current			100	nA	V <sub>CB</sub> =100V, I <sub>E</sub> =0
I <sub>EBO</sub>	Emitter Cut-off Current			100	nA	V <sub>EB</sub> =4V, I <sub>C</sub> =0
H <sub>FE</sub> (1)	DC Current Gain	100		400		V <sub>CE</sub> =5V, I <sub>C</sub> =100mA
H <sub>FE</sub> (2)	DC Current Gain	30				V <sub>CE</sub> =5V, I <sub>C</sub> =1A
V <sub>CE(sat)</sub>	Collector- Emitter Saturation Voltage		0.1	0.3	V	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage		0.85	1.2	V	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA
t <sub>ON</sub>	Turn-On Time		80		nS	} See specified test circuit
t <sub>STG</sub>	Storage Time		1000		nS	
t <sub>F</sub>	Fall Time		50		nS	
f <sub>t</sub>	Current Gain-Bandwidth Product		120		MHz	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA,
C <sub>ob</sub>	Output Capacitance		11		pF	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz

## h<sub>FE</sub> Classification

R	S	T
100—200	140—280	200—400