

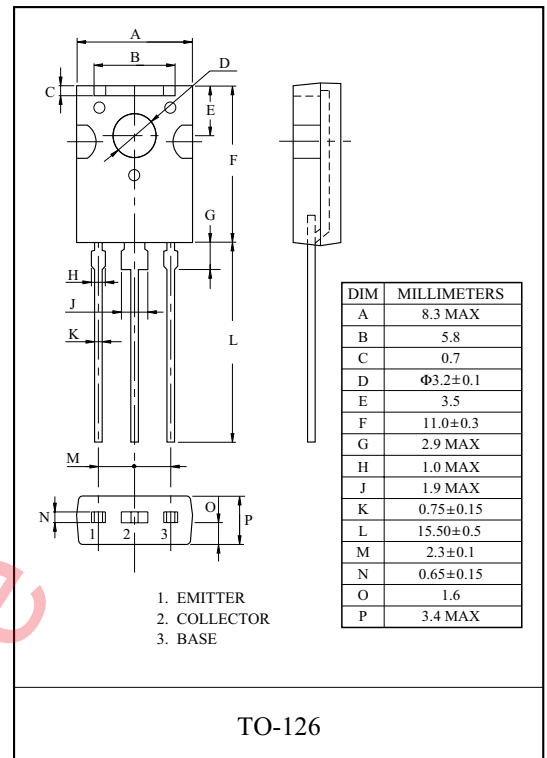
LOW FREQUENCY POWER AMP,
MEDIUM SPEED SWITCHING APPLICATIONS

FEATURES

- High breakdown voltage V_{CEO} 120V, high current 1A.
- Low saturation voltage and good linearity of h_{FE} .

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-120	V
Collector-Emitter Voltage	V_{CEO}	-120	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1	A
	I_{CP}	-2	
Collector Power Dissipation	P_C	1.5	W
		8	
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ\text{C}$

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut of Current	I_{CBO}	$V_{CB}=-50\text{V}, I_E=0$	-	-	-1	μA
Emitter Cut of Current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$	-	-	-1	μA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}$	-120	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}$	-120	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}$	-5	-	-	V
DC Current Gain	$h_{FE}(1)$ Note	$V_{CE}=-5\text{V}, I_C=-50\text{mA}$	100	-	320	
	$h_{FE}(2)$	$V_{CE}=-5\text{V}, I_C=-500\text{mA}$	20	-	-	
Gain Bandwidth Product	f_T	$V_{CE}=-10\text{V}, I_C=-50\text{mA}$	-	110	-	MHz
Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}, f=1\text{MHz}$	-	30	-	pF
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$	-	-0.15	-0.4	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$	-	-0.85	-1.2	V
Switching Time	Turn-on Time	$V_{CE}=-12\text{V}$ $I_C=10I_{B1}=-10I_{B2}=50\text{mA}$	-	80	-	nS
	Turn-off Time		-	100	-	
	Storage Time		-	600	-	

Note : $h_{FE}(1)$ Classification Y:100 ~ 200, GR:160 ~ 320

KTB631K

