



2SC3149

Preliminary

NPN SILICON TRANSISTOR

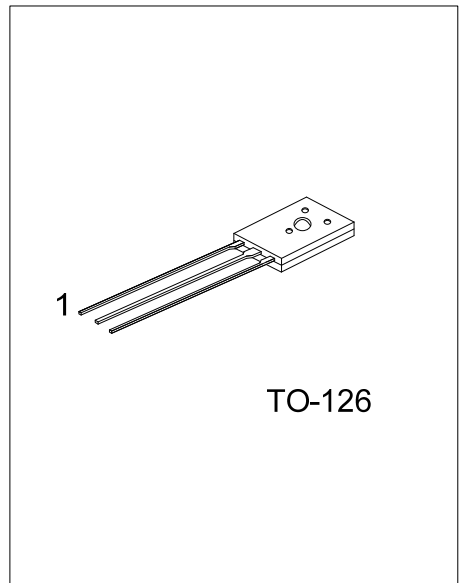
NPN TRANSISTOR

DESCRIPTION

The UTC **2SC3149** are series of NPN silicon planar transistor, and its suited to be used in power amplifier applications.

FEATURES

* Suit for power amplifier applications



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC3149L-T60-K	2SC3149G-T60-K	TO-126	B	C	E	Bulk

<p>2SC3149L-T60-K</p> <p>(1)Packing Type (2)Package Type (3)Lead Free</p>	<p>(1) K: Bulk (2) T60: TO-126 (3) G: Halogen Free, L: Lead Free</p>
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■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	1200	V
Collector-emitter voltage	V_{CEO}	800	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	0.5	A
Collector Dissipation	P_C	2	W
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=1\text{mA}, I_E=0\text{A}$	1200			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=5\text{mA}, I_B=0\text{A}$	800			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=1\text{mA}, I_C=0\text{A}$	7			V
Collector Cutoff Current	I_{CBO}	$V_{CB}=800\text{V}, I_E=0\text{A}$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0\text{A}$			10	μA
DC Current Gain (Note)	h_{FE}	$I_C=100\text{mA}, V_{CE}=5\text{V}$	10		40	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=200\text{mA}, I_B=40\text{mA}$			0.8	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=200\text{mA}, I_B=40\text{mA}$			1.5	V
Current Gain Bandwidth Product	f_T	$I_C=100\text{mA}, V_{CE}=10\text{V}$		15		MHz
Output Capacitance	C_{OB}	$V_{CB}=10\text{V}, f=1\text{MHz}$		30		pF
Turn-On Time	t_{ON}	$I_C=1\text{A}, I_{B1}=0.2\text{A}, I_{B2}=-0.4\text{A}, R_L=400\Omega, V_{CC}=400\text{V}$			1.0	μs
Storage Time	t_{STG}				3.0	μs
Fall Time	t_F				0.7	μs

Note: Pulse test: Pulse width=300 μs , Duty Cycle $\leq 2\%$

■ CLASSIFICATION OF h_{FE}

RANK	K	L	M
RANGE	10 ~ 20	15 ~ 30	20 ~ 40

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