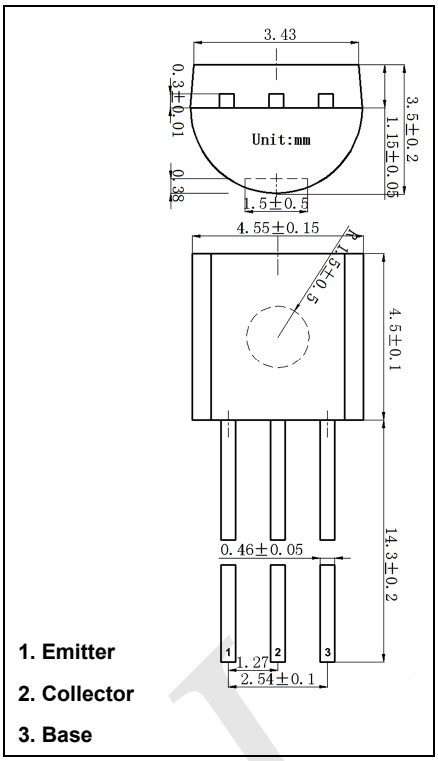
SHENZHEN LONG JING MICRO-ELECTRONICS CO., LTD.

TO-92 Plastic-Encapsulate Transistors

D1616AGC929 NPN Transistors



1. Emitter
2. Collector
3. Base

Features

■ Power dissipation

Marking:D1616AGC929

Maximum Ratings (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	120	V
V_{CEO}	Collector Emitter Voltage	60	V
V_{EBO}	Emitter Base Voltage	6	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	750	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 ~ +150	°C
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	167	°C/W

Electrical Characteristics (T_a=25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C = 10μA, I_E = 0	120			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C = 2mA, I_B = 0	60			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E = 10μA, I_C = 0	6			V
I_{CBO}	Collector cut-off current	V_{CB} = 60V, I_E = 0			100	nA
I_{EBO}	Emitter cut-off current	V_{EB} = 6V, I_C = 0			100	nA
$h_{FE(1)}$	DC current gain	V_{CE} = 2V, I_C = 100mA	135		600	
$h_{FE(3)}$		V_{CE} = 2V, I_C = 1A	81			
$V_{CE(sat)}$	Collector-emitter saturation voltage*	I_C = 1A, I_B = 50mA			0.3	V
$V_{BE(sat)}$	Base-emitter saturation voltage*	I_C = 1A, I_B = 50mA			1.2	V
V_{BE}	Base-emitter voltage*	V_{CE} = 2V, I_C = 50mA	0.6		0.7	V
f_T	Transition frequency	V_{CE} = 2V, I_C = 100mA	100			MHz
C_{ob}	Output capacitance	V_{CB} = 10V, I_E = 0, f = 1MHz			19	pF
t_{on}	Turn time	V_{CC} = 10V, I_C = 100mA, I_{B1} = -I_{B2} = 10mA		0.07		μs
t_s	Storage time			0.95		μs
t_f	Fall time			0.07		μs

*pulse test: PW≤350μS, δ≤2%.

Classification OF $h_{FE(1)}$

Rank	L	K	U
Range	135-270	200-400	300-600

Typical Characteristics