



**CHENMKO ENTERPRISE CO.,LTD**

*Halogens free devices*

**SURFACE MOUNT  
NPN Silicon Transistor**

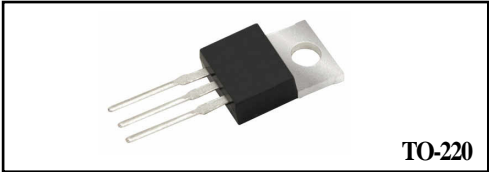
VOLTAGE 100Volts CURRENT 3 Ampere

**T03N100GP**

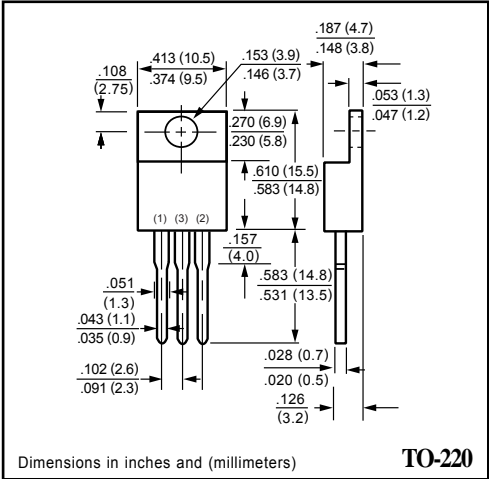
**APPLICATION**  
 \* General purpose applications.  
 \* Other switching applications.

**FEATURE**  
 \* Package. (TO-220)  
 \* DC Current Gain Specified to  $I_c=3A$   
 \* High Current Gain-Bandwidth Product :  $f_r=3MHz$  (Min.)

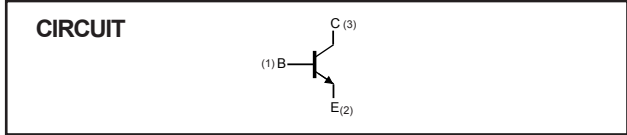
**CONSTRUCTION**  
 \*NPN Silicon Transistor



**TO-220**



**TO-220**



**LIMITING VALUES**

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{CBO}$	collector-base voltage	open emitter	-	100	V
$V_{CEO}$	collector-emitter voltage	open base	-	100	V
$V_{EBO}$	emitter-base voltage	open collector	-	5	V
$I_c$	collector current (DC)		-	3	A
$P_{tot}$	total power dissipation	$T_{amb} = 25\text{ }^\circ\text{C}$	-	2	W
$T_{stg}$	storage temperature		-	+150	$^\circ\text{C}$
$T_j$	junction temperature		-55	150	$^\circ\text{C}$

2012-02

**Note**

1. These ratings are limiting values which the serviceability of any semiconductor device may be impaired

## ELECTRICAL CHARACTERISTIC ( T03N100GP )

### CHARACTERISTICS

$T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{CBO}$	collector-base voltage	$I_C = 1\text{ mA}, I_E = 0$	100	–	V
$V_{CEO}$	collector-emitter voltage	$I_C = 30\text{ mA}, I_B = 0$	100	–	V
$V_{EBO}$	emitter-base voltage	$I_E = 1\text{ mA}, I_C = 0$	5	–	V
$I_{CBO}$	collector cut-off current	$V_{CB} = 100\text{ V}, I_E = 0$	–	200	$\mu\text{A}$
$I_{EBO}$	emitter cut-off current	$V_{EB} = 5\text{ V}, I_C = 0$	–	1	mA
$h_{FE}$	DC current gain	$I_C = 3\text{ A}; V_{CE} = 4\text{ V}$ $I_C = 1\text{ A}; V_{CE} = 4\text{ V}$	15 255	75 –	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = 3\text{ A}; I_B = 0.375\text{ A}$	–	1.2	V
$V_{BE(on)}$	base-emitter voltage	$I_C = 3\text{ A}; V_{CE} = 4\text{ V}$		1.8	V
$f_T$	transition frequency	$I_C = 500\text{ mA}; V_{CE} = 10\text{ V};$	3	–	MHz

**Note :**

Pulse test:  $t_p \leq 300\mu\text{Sec}; \delta \leq 0.02.$

# RATING CHARACTERISTIC CURVES ( T03N100GP )

