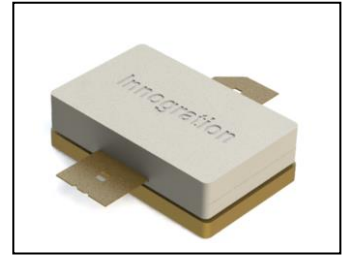




# 10W,50V Plastic RF LDMOS Transistor

## Description

The ITGV22010T2C is a 10-watt, highly rugged, LDMOS transistor, designed for any general applications at frequencies up to 2.2GHz, **It is based on air cavity plastic package named as T2C with outline highly compatible as TO270 from other suppliers**



## Features

- High Efficiency and Linear Gain Operations
- Integrated ESD Protection
- Excellent thermal stability, low HCI drift
- Large Positive and Negative Gate/Source Voltage Range for Improved Class C Operation
- Pb-free, RoHS-compliant

## Suitable Applications

- RF power amplifiers for CW applications
- Industrial, scientific and medical applications
- Broadcast transmitter applications

**Table 1. Maximum Ratings**

Rating	Symbol	Value	Unit
Drain--Source Voltage	$V_{DSS}$	+110	Vdc
Gate--Source Voltage	$V_{GS}$	-10 to +10	Vdc
Operating Voltage	$V_{DD}$	+55	Vdc
Storage Temperature Range	$T_{stg}$	-65 to +150	°C
Case Operating Temperature	$T_c$	+150	°C
Operating Junction Temperature	$T_j$	+225	°C

**Table 2. Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Thermal Resistance, Junction to Case $T_c=85^\circ\text{C}$ , $T_j=200^\circ\text{C}$ , DC test	$R_{\theta JC}$	5.1	°C/W

**Table 3. ESD Protection Characteristics**

Test Methodology	Class
Human Body Model (per JESD22--A114)	Class 2

**Table 4. Electrical Characteristics** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
<b>DC Characteristics</b> Drain-Source Voltage $V_{GS}=0$ , $I_{DS}=100\mu\text{A}$	$V_{(BR)DSS}$		110		V
Zero Gate Voltage Drain Leakage Current ( $V_{DS} = 90\text{V}$ , $V_{GS} = 0\text{V}$ )	$I_{DSS}$	—	—	1	$\mu\text{A}$
Gate--Source Leakage Current ( $V_{GS} = 11\text{V}$ , $V_{DS} = 0\text{V}$ )	$I_{GSS}$	—	—	1	$\mu\text{A}$
Gate Threshold Voltage	$V_{GS(th)}$	—	2	—	V



( $V_{DS} = 50V$ , $I_D = 600 \mu A$ )					
Gate Quiescent Voltage ( $V_{DD} = 50V$ , $I_D = 25mA$ , Measured in Functional Test)	$V_{GS(Q)}$	—	3.4	—	V

**Load Mismatch (In Innogrations Test Fixture, 50 ohm system):**  $V_{DD} = 50Vdc$ ,  $I_{DQ} = 25 mA$ ,  $f = 2200 MHz$

VSWR 10:1 at 10W pulse CW Output Power	No Device Degradation
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## Package Outline

Flanged ceramic package; 2 leads

### T2C POD

Unit:mm  
Tolerances(unless specified): x.x ±0.1

Rev.01 (2026.01.20)

OUTLINE VERSION	REFERENCE			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA		
PKG-T2C					2018.1.31

## Revision history

Table 7. Document revision history

Date	Revision	Datasheet Status
2025/12/30	Rev 1.0	Preliminary Datasheet

Application data based on

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