







U553, U554, U555 Current Regulator Diode

Features

InterFET N0016H Geometry

• Low Noise: 5 nV/VHz Typical

· Low Capacitance: 2pF Typical

RoHS Compliant

• SMT, TH, and Bare Die Package options.

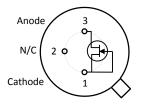
Applications

- Current Regulation
- · Current Limiting
- Biasing

Description

The 50V InterFET U553, U554, and U555 JFET's are targeted for current regulation and limiting applications. The TO-18 package is hermetically sealed and suitable for military applications.

TO-18 Bottom View





Product Summary

Parameters		U553 Min	U554 Min	U555 Min	Unit
Vop	Peak Operating Voltage	50	50	50	V
IF	Regulator Current	0.18	0.6	1.4	mA
V_{L}	Limiting Voltage	0.75 (typ)	0.55 (typ)	0.75 (typ)	V

Ordering Information Custom Part and Binning Options Available

Custom Fait and Billing Options Available									
Part Number	Description	Case	Packaging						
U553; U554; U555	Through-Hole	TO-92-2L	Bulk						
SMPU553; SMPU554; SMPU555	Surface Mount	SOT23	Bulk						
	7" Tape and Reel: Max 3,000 Pieces		Minimum 1,000 Pieces						
SMPU553TR; SMPU554TR; SMPU555TR	13" Tape and Reel: Max 9,000 Pieces	SOT23	Tape and Reel						
U553COT; U554COT; U555COT	Chip Orientated Tray (COT Waffle Pack)	COT	400/Waffle Pack						
U553CFT; U554CFT; U555CFT	Chip Face-up Tray (CFT Waffle Pack)	CFT	400/Waffle Pack						



Disclaimer: It is the Buyers responsibility for designing, validating and testing the end application under all field use cases and extreme use conditions. Guaranteeing the application meets required standards, regulatory compliance, and all safety and security requirements is the responsibility of the Buyer. These resources are subject to change without notice.









Electrical Characteristics

Maximum Ratings (@ T_A = 25°C, Unless otherwise specified)

	Parameters	Value	Unit
Vop	Peak Operating Voltage	50	V
I_{FG}	Continuous Forward Gate Current	50	mA
PD	Continuous Device Power Dissipation	360	mW
Р	Power Derating	2.88	mW/°C
Tı	Operating Junction Temperature	-55 to 135	°C
T _{STG}	Storage Temperature	-55 to 135	°C

Static Characteristics (@ TA = 25°C, Unless otherwise specified)

			U553			U554			U555			
	Parameters	Conditions	Min	Тур	Max	Min	Тур	Max	Min	Тур	Max	Unit
IF	Regulator Current	V _F = 25V	0.18	0.5	0.75	0.6	1	1.6	1.4	2	2.6	mA
VL	Limiting Voltage	I _F = 0.9 I _{F(MIN)}		0.75	1.3		0.55	1.75		0.75	2.15	٧
V _{OP}	Peak Operating Voltage	$I_F = 1.1 I_{F(MAX)}$	50			50			50			٧

Dynamic Characteristics (@ TA = 25°C, Unless otherwise specified)

			U553		U554			U555				
	Parameters	Conditions	Min	Тур	Max	Min	Тур	Max	Min	Тур	Max	Unit
ZD	Dynamic Impedance	V _F = 25V, f = 1kHz		13			5			1.8		МΩ
ZK	Knee Impedance	V _F = 6V, f = 1kHz		1			0.4			0.17		МΩ



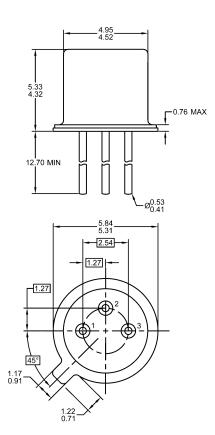






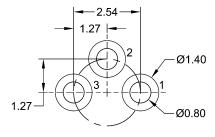
TO-18 Mechanical and Layout Data

Package Outline Data



- 1. All linear dimensions are in millimeters.
- 2. Package weight approximately 0.29 grams
- 3. Bulk product is shipped in standard ESD shipping material
- 4. Refer to JEDEC standards for additional information.

Suggested Through-Hole Layout



- 1. All linear dimensions are in millimeters.
- 2. The suggested land pattern dimensions have been provided as a straight lead reference only. A more robust pattern may be desired for wave soldering and/or bent lead configurations.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

InterFET:

<u>U553</u> <u>U554</u> <u>U555</u>