
2SJ479(L), 2SJ479(S)

Silicon P Channel DV-L MOS FET
High Speed Power Switching

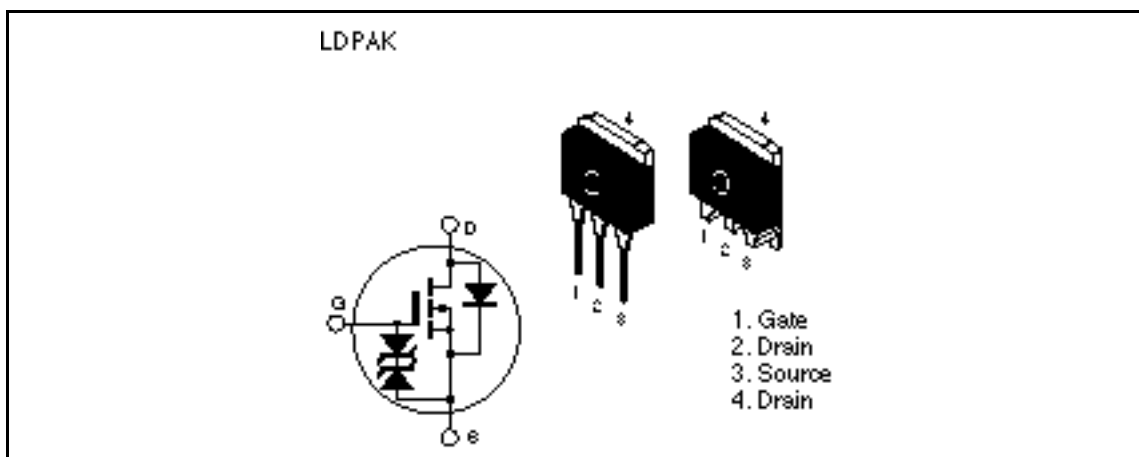
HITACHI

ADE-208-541
1st. Edition

Features

- Low on-resistance
 $R_{DS(on)} = 25 \text{ m}\Omega$ typ.
- 4V gate drive devices.
- High speed switching

Outline



2SJ479(L), 2SJ479(S)

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	-30	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	-30	A
Drain peak current	$I_{D(pulse)}$ ^{Note1}	-120	A
Body to drain diode reverse drain current	I_{DR}	-30	A
Channel dissipation	Pch ^{Note2}	50	W
Channel temperature	Tch	150	°C
Storage temperature	$Tstg$	-55 to +150	°C

Notes: 1. PW = 10µs, duty cycle = 1 %

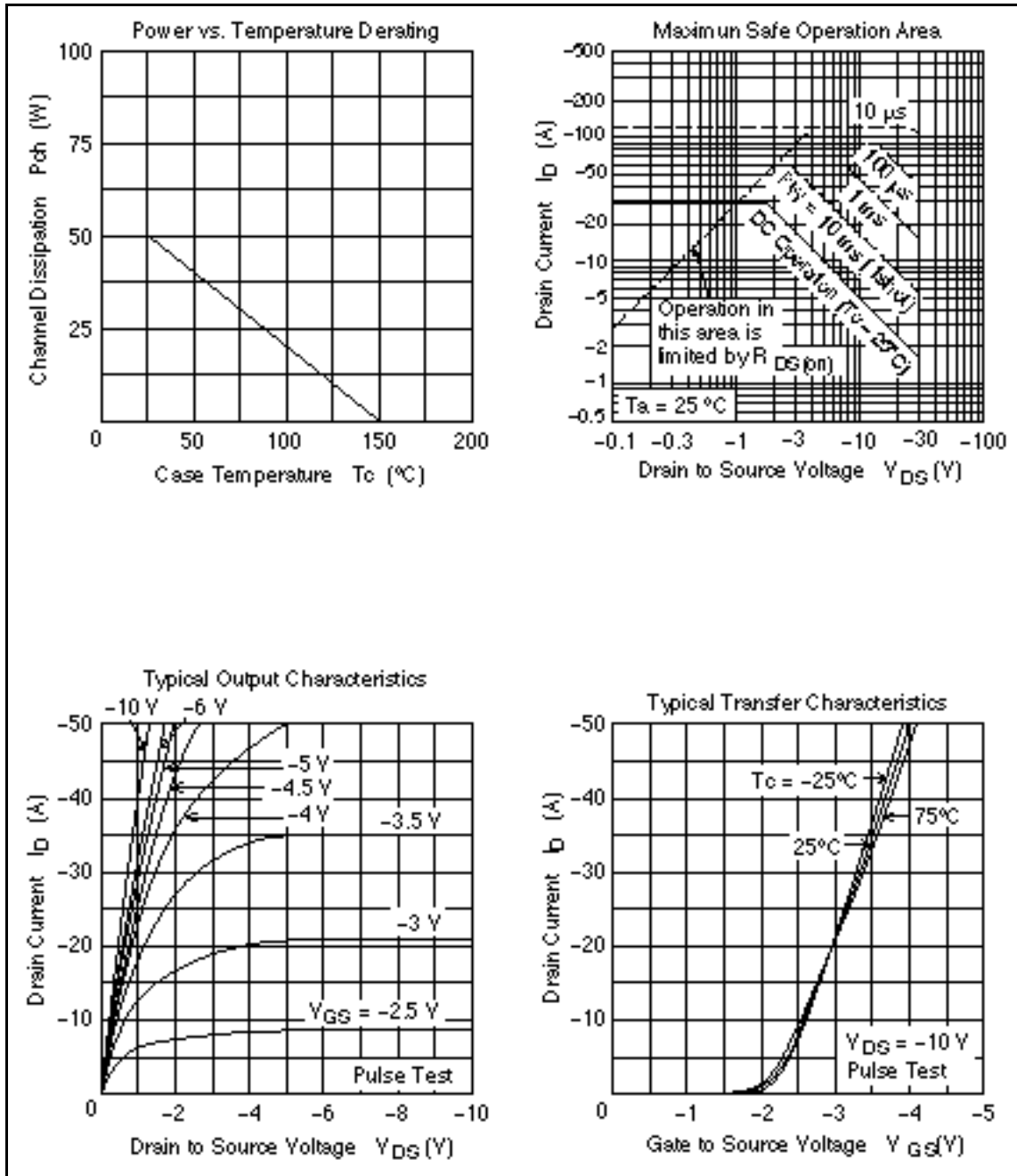
2. Value at Tc = 25°C

Electrical Characteristics (Ta = 25°C)

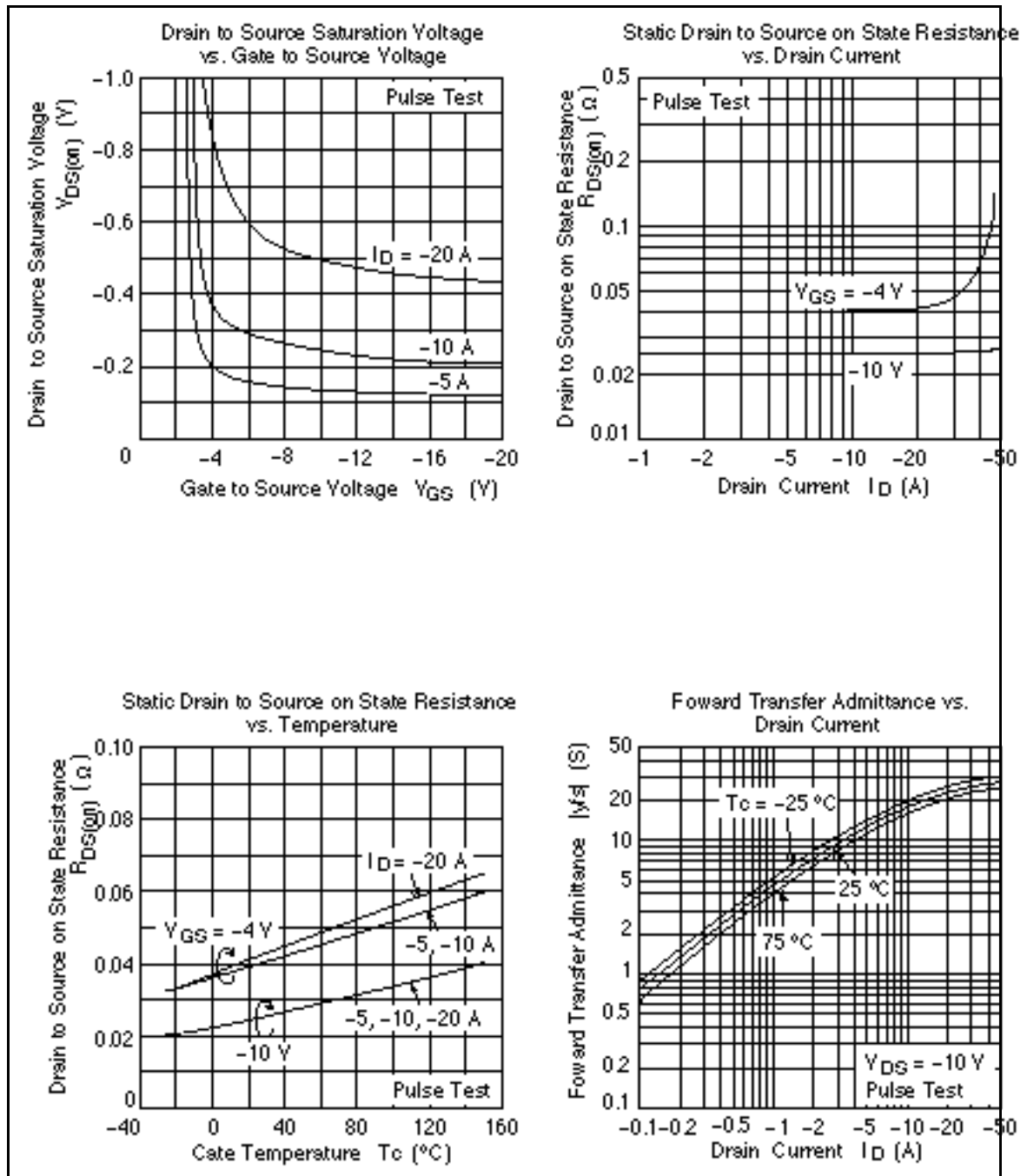
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain to source breakdown voltage	$V_{(BR)DSS}$	-30	—	—	V	$I_D = -10mA, V_{GS} = 0$
Gate to source breakdown voltage	$V_{(BR)GSS}$	±20	—	—	V	$I_G = ±100µA, V_{DS} = 0$
Zero gate voltage drain current	I_{DSS}	—	—	-10	µA	$V_{DS} = -30V, V_{GS} = 0$
Gate to source leak current	I_{GSS}	—	—	±10	µA	$V_{GS} = ±16V, V_{DS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	-1.0	—	-2.0	V	$I_D = -1mA, V_{DS} = -10V$
Static drain to source on state resistance	$R_{DS(on)}$	—	25	35	m	$I_D = -15A, V_{GS} = -10V$ ^{Note3}
	$R_{DS(on)}$	—	40	60	m	$I_D = -15A, V_{GS} = -4V$ ^{Note3}
Forward transfer admittance	$ y_{fs} $	12	20	—	S	$I_D = -15A, V_{DS} = -10V$ ^{Note3}
Input capacitance	C_{iss}	—	1700	—	pF	$V_{DS} = -10V$
Output capacitance	C_{oss}	—	950	—	pF	$V_{GS} = 0$
Reverse transfer capacitance	C_{rss}	—	260	—	pF	f = 1MHz
Turn-on delay time	$t_{d(on)}$	—	20	—	ns	$V_{GS} = -10V, I_D = -15A$
Rise time	t_r	—	290	—	ns	$R_L = 0.67$
Turn-off delay time	$t_{d(off)}$	—	170	—	ns	
Fall time	t_f	—	130	—	ns	
Body to drain diode forward voltage	V_{DF}	—	-1.1	—	V	$I_F = -30A, V_{GS} = 0$
Body to drain diode reverse recovery time	t_{rr}	—	70	—	ns	$I_F = -30A, V_{GS} = 0$ diF/ dt = 50A/µs

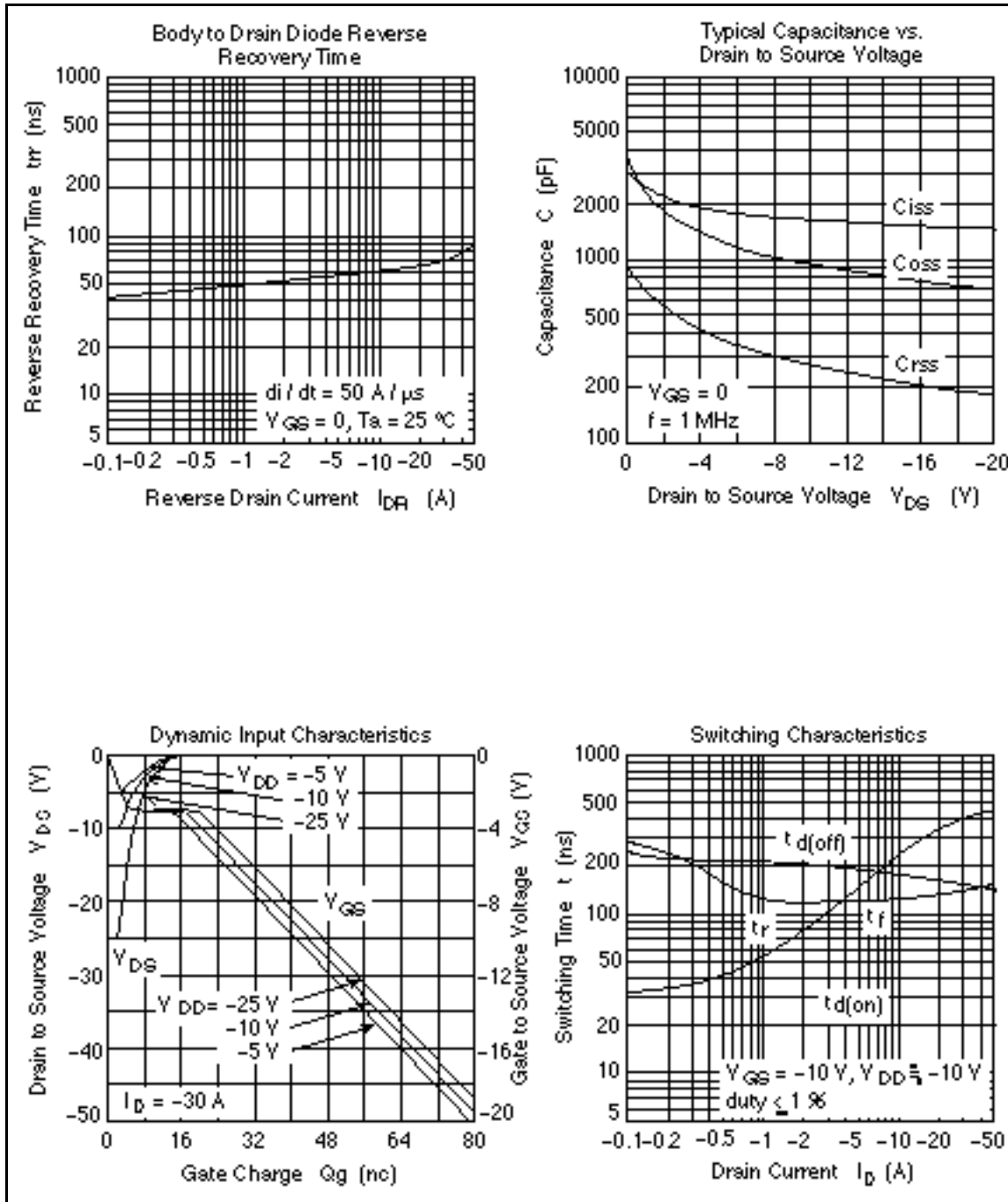
Note: 3. Pulse test

Main Characteristics

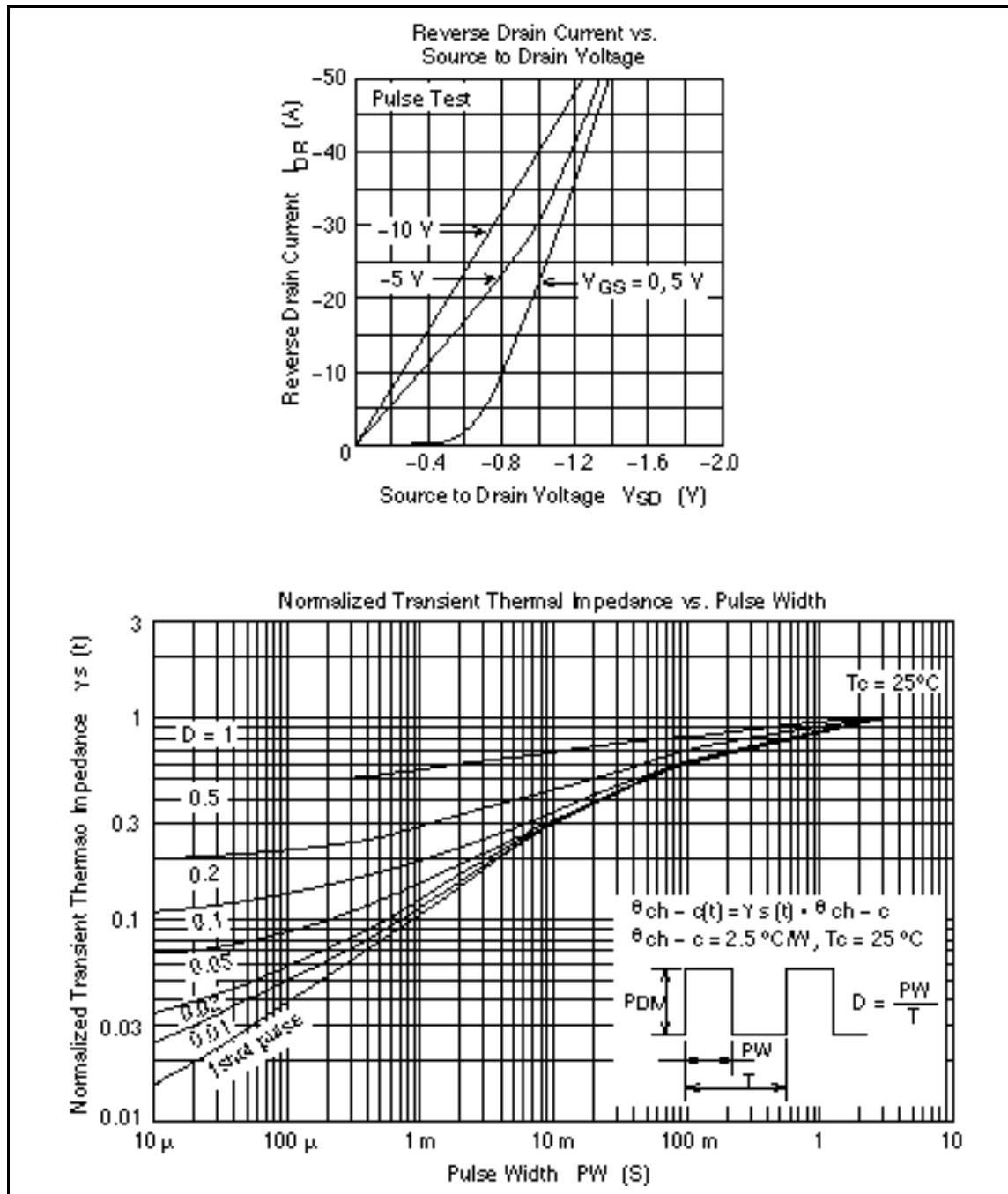


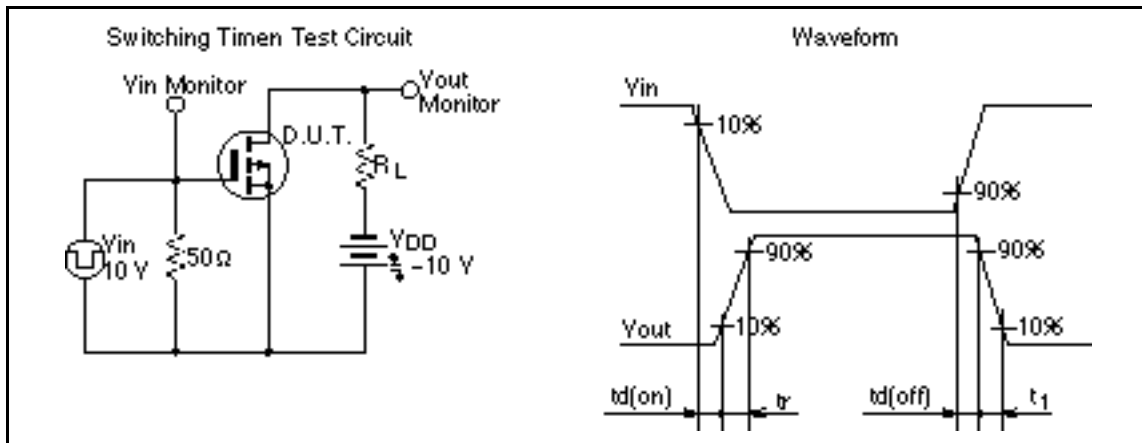
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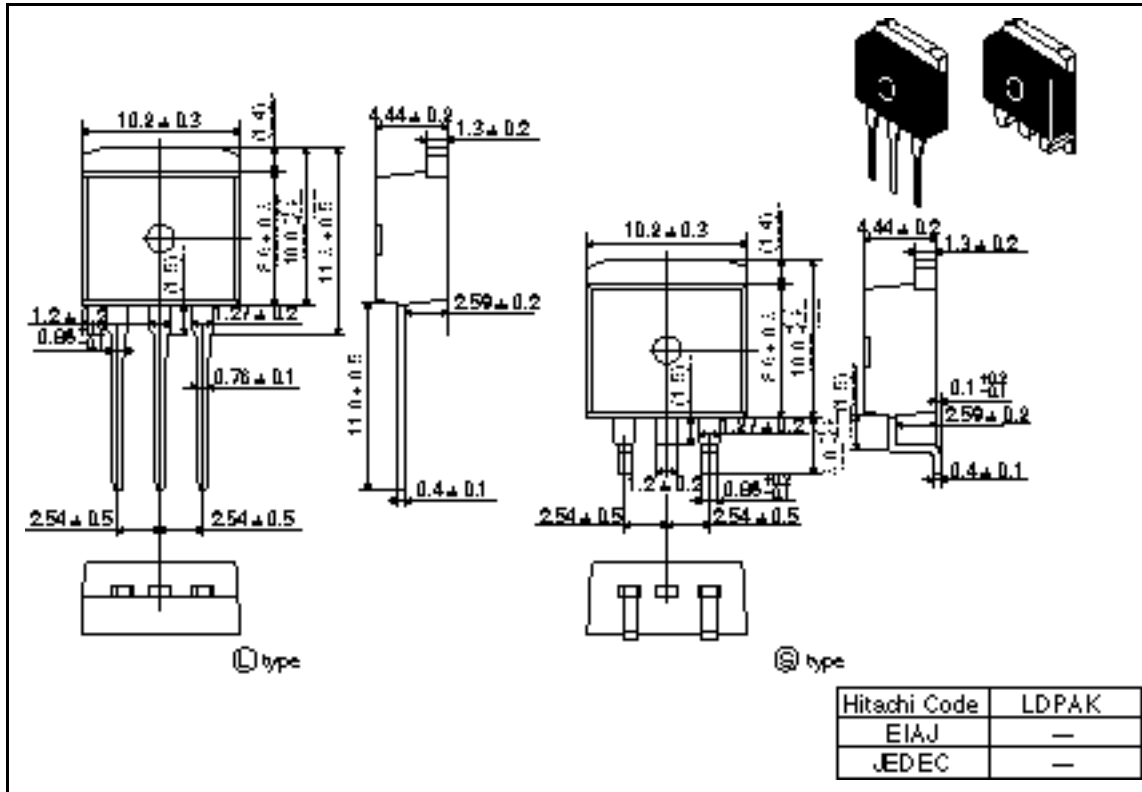




2SJ479(L), 2SJ479(S)

Package Dimensions

Unit: mm



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