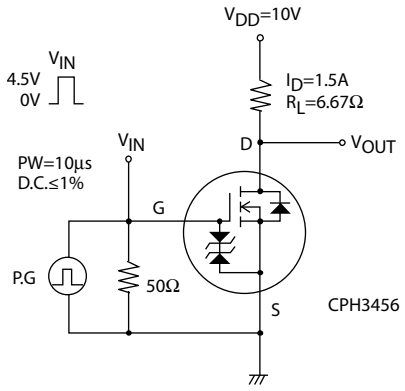
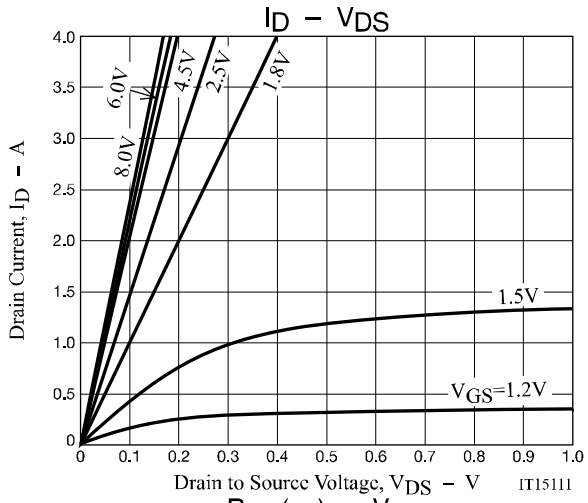
Electrical Characteristics at Ta = 25°C

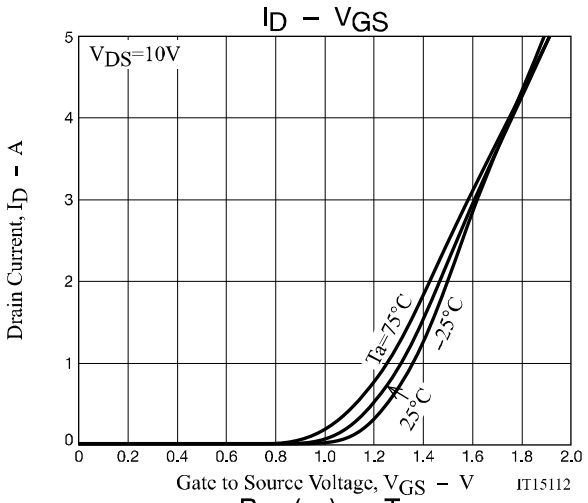
Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0V	20			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=20V, V_{GS}=0V			1	μA
Gate to Source Leakage Current	I_{GSS}	V_{GS}=±8V, V_{DS}=0V			±10	μA
Gate Threshold Voltage	$V_{GS}(th)$	V_{DS}=10V, I_D=1mA	0.4		1.3	V
Forward Transconductance	g_{FS}	V_{DS}=10V, I_D=1.5A		2.8		S
Static Drain to Source On-State Resistance	$R_{DS}(on)1$	I_D=1.5A, V_{GS}=4.5V		54	71	mΩ
	$R_{DS}(on)2$	I_D=1A, V_{GS}=2.5V		73	103	mΩ
	$R_{DS}(on)3$	I_D=0.5A, V_{GS}=1.8V		104	156	mΩ
Input Capacitance	Ciss	V_{DS}=10V, f=1MHz		260		pF
Output Capacitance	Coss			65		pF
Reverse Transfer Capacitance	Crss			50		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit		6.2		ns
Rise Time	t_r			19		ns
Turn-OFF Delay Time	$t_d(off)$			30		ns
Fall Time	t_f			28		ns
Total Gate Charge	Qg	V_{DS}=10V, V_{GS}=4.5V, I_D=3.5A		2.8		nC
Gate to Source Charge	Qgs			0.6		nC
Gate to Drain “Miller” Charge	Qgd			0.9		nC
Forward Diode Voltage	V_{SD}	I_S=3.5A, V_{GS}=0V		0.85	1.2	V

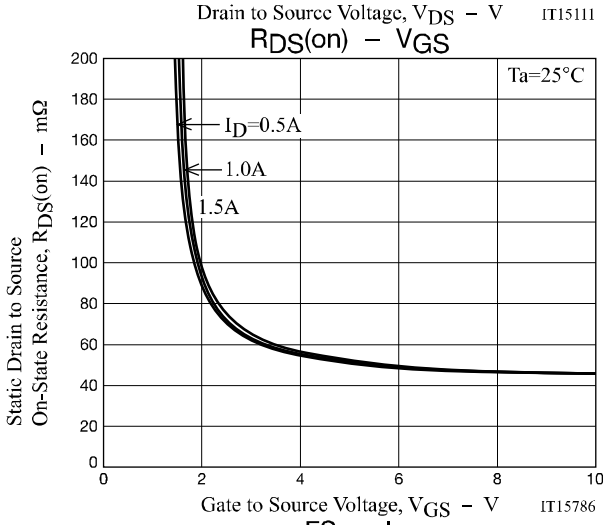
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

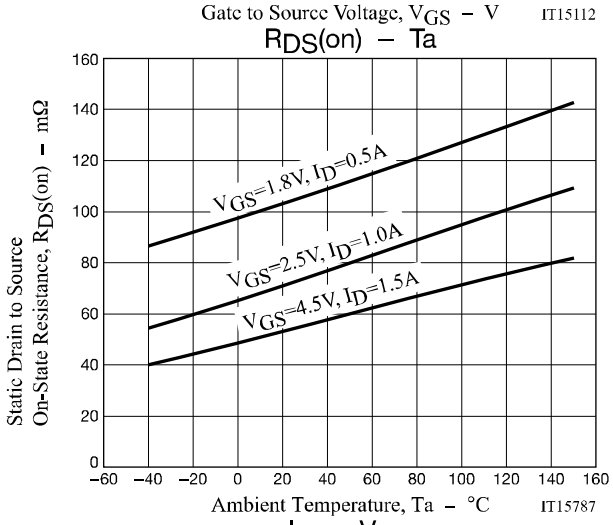
Switching Time Test Circuit

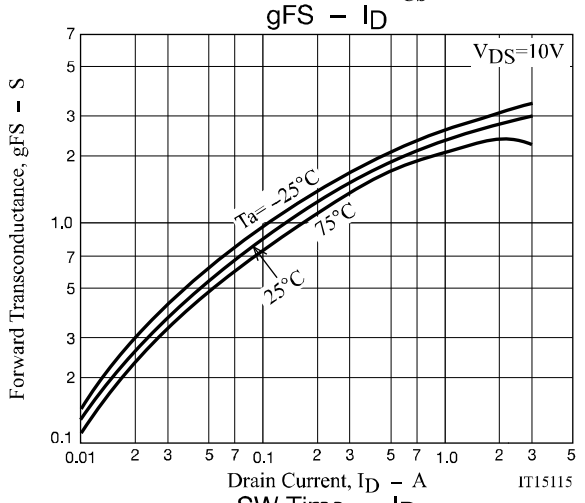


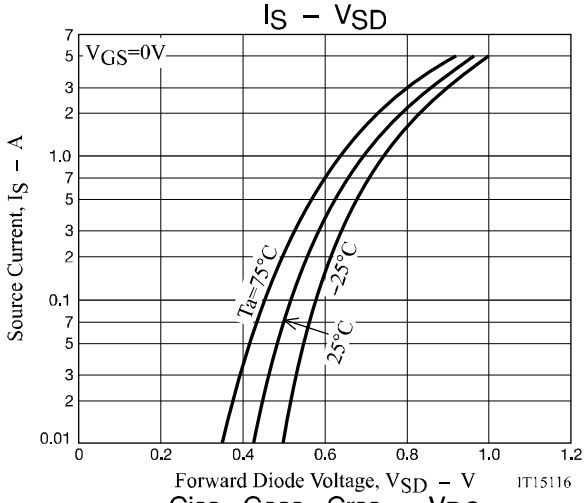


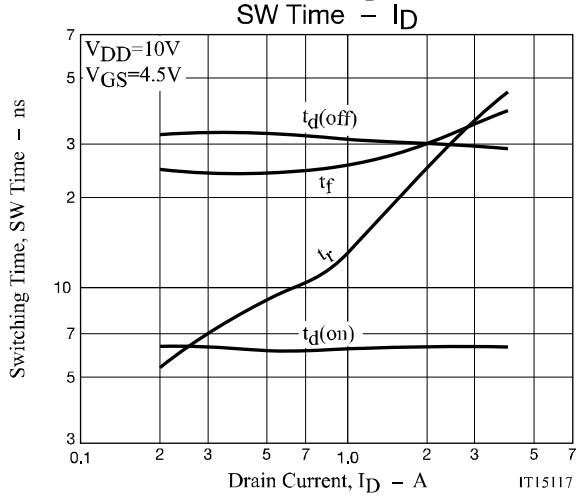


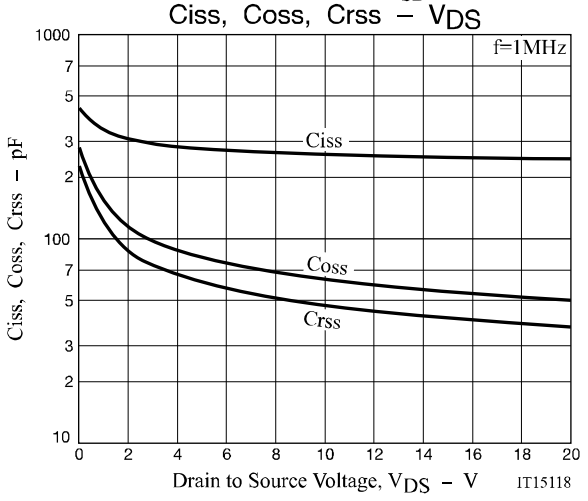


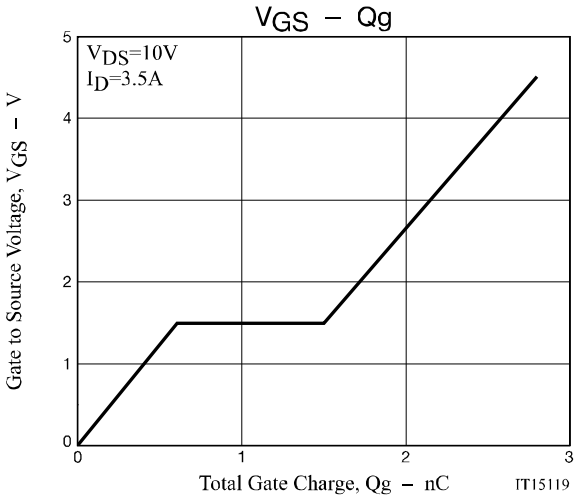


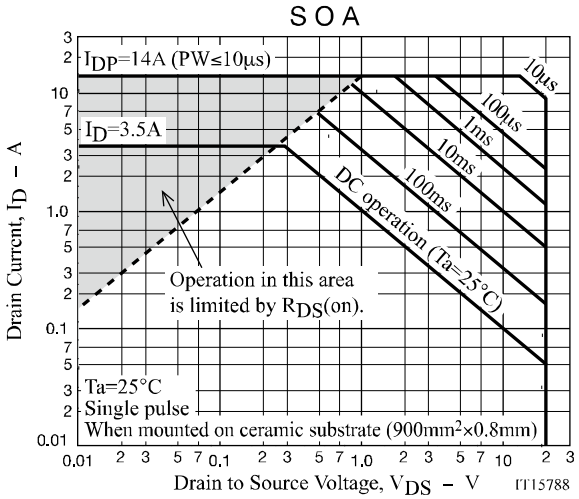


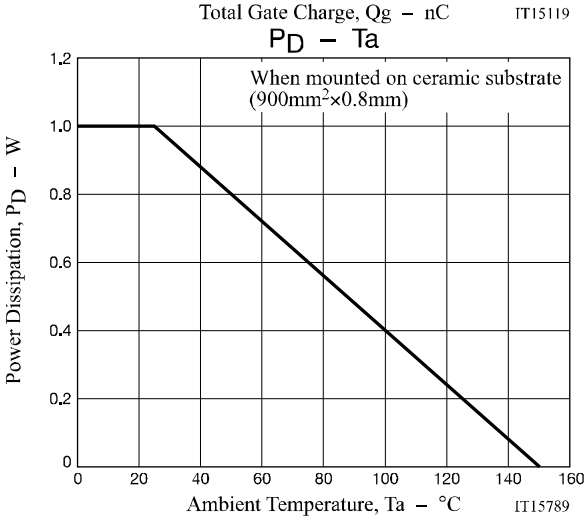


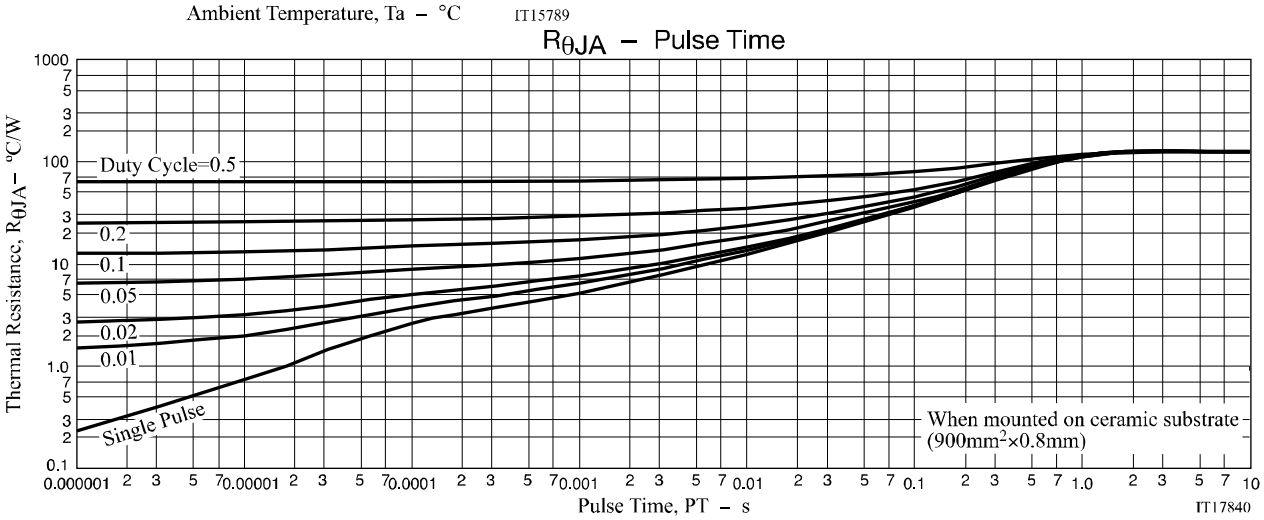












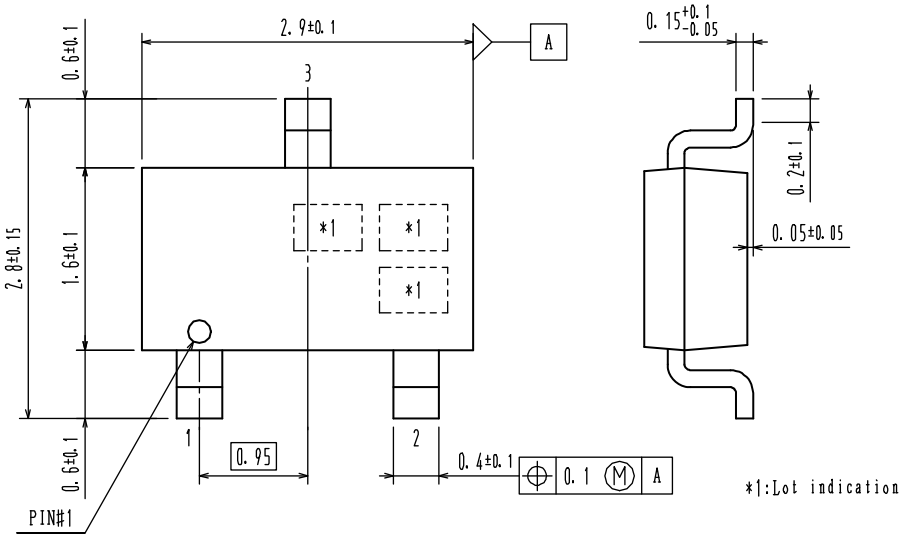
Package Dimensions

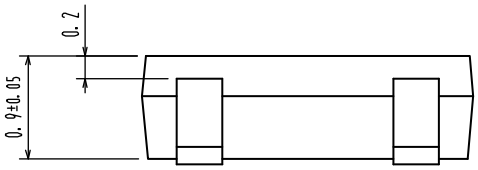
CPH3456-TL-H/ CPH3456-TL-W

CPH3
CASE 318BA
ISSUE O

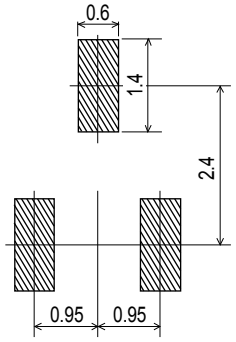
Unit : mm

1 : Gate
2 : Source
3 : Drain





Recommended Soldering Footprint



ORDERING INFORMATION

Device	Package	Shipping	Note
CPH3456-TL-H	CPH3, SC-59 SOT-23, TO-236	3,000 pcs. / reel	Pb-Free and Halogen Free
CPH3456-TL-W			

Note on usage : Since the CPH3456 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.